Croonian Lectures

ON THE

INFLUENCE OF THE CIRCULATION ON THE NERVOUS SYSTEM.

Delivered before the Royal College of Physicians of London,

By WALTER MOXON, M.D. Lond., F.R.C.P.

LECTURE II.—Part I.

Mr. President and Gentlemen,—In my last lecture I endeavoured to describe means whereby the entry and exit of blood to and from the interior of the cranium are so arranged as to favour the maintenance of a constantly sufficient supply to the brain, whilst obviating ill results of undue stress of blood; I then passed on to the effects produced when great atmospheric pressure forces blood into the closed cavities which contain the nervous centres; and, finally, I digressed to point out the weakness in the circulation of the lowest part of the spinal cord which arises through its more precarious supply from above and want of reinforcement from below. Whilst upon the arterial supply to the spinal cord, it occurs to me to observe a point which has struck me forcibly in reading descriptions of experiments made for the purpose of tracing the course of fibres in the cord, because the mode in which the arterial supply may influence the results of such experiments seems apt to escape notice, and this may be a part of the reason why different observers differ in their results. Thus, for instance, in one of the experiments made by a great master in this branch of investigation, a comparison is set up between the effects upon the sensibility of posterior nerve-roots, when incisions are made near together across the posterior columns above and below a single pair of roots, and the effects produced when similar incisions are made far apart, including five posterior roots between them. When such incisions are close together sensation in the single pair of roots between is lost; when the incisions are far apart, the roots not only retain their sensibility, but appear rather more sensitive than natural. If we bear in mind the posterior spinal arteries, and the mode of their reinforcement by occasional branches on the nerves, we shall see that when the incisions are close together, the posterior spinal arteries above and below are severed, and the small segment drained of its blood, so that surely insensibility would arise from this cause alone. If, on the other hand, the incisions include as many as five nerve-roots between them, there is a very great probability indeed that a large reinforcing artery will enter the posterior spinal in so great a length, and thus maintain a blood-supply. But it may be asked, will such an explanation serve to show why the sensibility is increased? We must not, however, assume that evidence of unnatural tenderness is a proof of increased sensibility; this no doubt is not the case. I have now under care in Philip ward a man who has paralysis and insensibility to touch in his right leg, but nothing the matter with his left leg. In this man a pinch which causes only a smile when applied to his sound limb, produces a cry and a request against its repetition when it is applied to the limb which cannot feel a touch or localise the pinch. Hence signs of pain do not prove sense of touch, and the conductors of normal sensibility cannot be traced by signs of pain. In this man the skin of the affected limb is pinker and thicker than the skin of the sound limb. This far from unprecedented case shows that we may expect proofs of unnatural sensitiveness to coincide with considerable anæsthesia; and the unnatural sensibility to pain in the posterior roots may itself be taken as some evidence that the normal sensibilities of the part were reduced. In following out the points that have arisen with reference to the circulation of the spinal cord, I have digressed considerably from the main line of my argument, which is bent on inquiring into the soundness of the view which teaches that congestion of the brain is an essential or primary disease.

And now I will return to the effects of caisson pressure upon the brain, if one can so speak when we find that the pressure had no effects at all upon the brain except to give a general feeling of buoyancy, which was, I think, very properly ascribed to the greater quantity of oxygen that entered the blood under high pressure. The caisson pressure offers us an example of active and unobstructed congestion of the vessels of the brain with oxygenated blood, no complication with a venous state of the circulating fluid being present, so that it may be described as a forcible arterial congestion, without impediment to free exit of the blood—an active arterial congestion purely affecting the blood-supply, and free from complication with disorders of the nervous tissue.

The familiar phenomena of strangulation and of obstruction of the jugular veins causing forced delay of exit of the venous blood should not be allowed to complicate the question I am approaching. But as the sensations accompanying venous obstruction in the neck give rise to a very general bias in favour of the notion of cerebral congestion at large, it may be well for me to state the bearings of this subject on the special question whether congestion of the brain arises independently as a distinct form or as several distinct forms of disease. It would be scarcely possible for me to mention all the many modes in which venous congestion of the brain is constantly brought before us in forms more or less pure. Perhaps the subtlest of the causes of such congestion is that which has been well investigated in the study of school diseases. When children bend over low desks during their lessons, a proportion of them are observed to suffer from headache, and some become faint, and some bleed at the nose; and such results may be ascribed to cerebral congestion. But in using such an expression we must notice that the meaning of it covers at least three distinct things. The ill effects which come about through lowness of the desks in schools are set down in detail by Virchow—first, to the mental strain of the learners; second, to occasional check to respiration during close attention; and third, to obstruction of veins by bending the neck. But each of these things is quite different from the others in its mode of operation—widely different indeed; and each in its own way appeals for its special means of relief. Mental over-strain is cerebral exhaustion; lack of respiration is carbonic acid poisoning together with deficiency of oxygen; and compressed jugulars give delayed exit of venous blood and consequent venous congestion. The term "congestion of the brain" has been given in a general way to these rather complicated conditions, and there is no harm in such a use of the term, unless it induces us to forget the several distinct causes which combine to produce the ill results ascribed to it, and in the term "congestion of the brain" to lose sight of the mental exhaustion and carbonic acid poisoning. Indeed, if we wish to ascertain the effects of obstruction of the jugular veins and retention of venous blood, we must choose some more pure example of such obstruction. I will not enter more fully into the effects of impeded flow in the jugular veins than is necessary to define its relation to the "congestion of the brain" of authors with which I have to do. Such obstruction may be acute or chronic, and may vary in degree in either case from slight obstacle to absolute closure. Many observations of the extent of effects produced by check to the flow in the jugular veins have led me to the conviction that venous obstruction is borne with so much impunity when it is certainly present and severe that one must not suppose such obstruction to be inducing serious results in cases where evidence of its existence is wanting or trifling.

When speaking of obvious causes of obstruction to the current in the jugular vein, I refer in particular to cases of prolonged paroxysm of whooping-cough, or of the cough of emphysema, and to cases of tumour compressing or involving the jugular vein. When a person is in a seizure of either of the forms of protracted cough which I have mentioned, the evidences of venous obstruction and imperfect aeration of the blood become very apparent, often painfully so, and yet cerebral disturbances but very rarely show themselves. I have been impressed by the small number and slight degree of complaints of cerebral symptoms in such cases. Twice only have I known persons affected with old bronchitis, and habitually almost cyanosed, to stagger and fall in the extreme height of their paroxysms of cough. The description given by their friends was of extreme blueness and turgescence of veins when the staggering

occurred, so that cyanosis must have largely shared in its causation. Everyone must have seen the veins rise on the forehead, and a dusky colour suffuse the face of persons coughing violently, when meantime nothing noticeable happened to the comfort of the brain. What I am seeking thus to establish is the proposition that congestive strangulation of veins is borne with impunity up to visible and obvious extents, and therefore symptoms cannot be ascribed to it when the visible and obvious conditions of venous overfulness are awanting. Also, I believe that general experience will be with me in recalling how, in examples of tumours in the cervical region pressing upon the jugular veins, and even involving and closing one of them, the comfort of the brain is surprisingly little invaded. One of the most clear-headed and intelligent patients I have seen had the neck enlarged so that shortly below the chin it exceeded the girth of the head and face, and these were livid with venous obstruction; yet she denied to my questions every sign of cerebral annoyance. When such ascertained venous congestion, producing obvious retention of blood, fails to cause serious symptoms, unascertained and unproven congestion cannot be called in as a supposition to explain serious symptoms.

I have so far endeavoured to adduce examples, first of extreme arterial intracranial blood pressure, and second of visible and obvious intracranial venous blood pressure, so that the absence of serious ill effects under conditions of ascertained great or evident blood pressure within the skull may be within our minds in approaching consideration of the disorders described under the name of congestion of the brain.

There is still one step remaining before I can proceed to the task of examining into the clinical symptoms described as due to this disease, and that is to make clear how far it is possible to show by post-mortem examination that a person has died from congestion of the brain. We must spend some time upon this question, because following and supporting the clinical descriptions of congestion of the brain we find a morbid anatomy of congestion of the brain. Just as after the clinical description of acute pneumonia, we find the morbid anatomy of acute pneumonia, and the morbid anatomy of acute pneumonia does verify and explain the presence and the symptoms of pneumonia up to a certain point, failing only in showing why that particular person died at that particular time, and leaving it to clinical observation to answer that question, which is the vitally important question in each case. The post-mortem examination of pneumonia never tells us why that particular death occurred, but it leaves us in no doubt about the characters of the case; one can be quite sure that pneumonia did exist. But will any morbid anatomy of congestion of the brain afford us the same kind of proof, or do anything of the kind? The question is, Can you in any individual case prove by post-mortem appearances that death was caused by congestion of the brain, or even that a state of congestion of the brain or overfulness of its bloodvessels preceded death? I believe these questions must be answered firmly in the negative. In establishing such a negative one has to meet with a very strong prejudice, rooted in the most tenacious grounds, the grounds of convenience and of ancient and universal acceptance. After examining a body dead from brain symptoms, when all you were able to see in your examination was only that the veins were very full of blood, it is very convenient to be able to say that death was caused by congestion of the brain, and it sounds much better skilled witness than to say that death was caused by insensibility; so that the doctrine of congestion of the brain is convenient, and the universality of its acceptance may be illustrated by the naïve earnestness with which authors of great works adopt it; one author of a great work says, on one page, that patients never die in the first stage of congestion of the spinal membranes, and on another page he says that post-mortem shows in the first stage redness of the membranes; but if they do not die how is the redness known? It is very difficult to deal with a delusion thus deeply rooted in faith and prejudice, a delusion which is so much favoured by occasional very striking appearances at imperfectly conducted post-mortems. Thus, in the Clinical Society's Transactions there is a very remarkable spinal case, probably a case of acute myelitis, but introduced to the Society as congestion of the spinal membranes, and, indeed, the membranes were seen to be frightfully congested. But Mr. Hilton pointed out long ago the necessity of observing whether the cervical veins are divided before you make a remark upon the congestion of the veins of the nervous centres; and, indeed, if we don't divide these veins we will be sure to see frightful congestion when we look at the membranes of the brain and spinal cord; but the observers of this case only opened the cranium and spine.

I mention these examples only to illustrate how readily the mind of a physician adopts on insufficient evidence the assumption of a congested state of the brain. But in some of our most justly and highly valued text-books we find amongst a series of excellent, learned, and ably written articles on particular diseases, that a long chapter on congestion of the brain finds a place, and this chapter gathers groups of symptoms of a disease called congestion of the brain, and collects signs of morbid anatomy of the disease so named, and this gathering of symptoms includes a sweeping together of all such things as are obscure and associated with stupor, and have an acute course, and the collection of anatomical signs includes a sweeping up of all the marks of change in the bloodvessels or texture of the brain, however evidently chronic and ancient. And the collection of chronic and ancient changes stands there to the gathering of acute and obscure symptoms as the morbid anatomy of a definite fatal disease—congestion of the brain.

And so in our great books we find this chapter on congestion of the brain made up of obscure fragments out of the history of all sorts of diseased states. In the work which contains the chapter we generally find that there was already a chapter on epilepsy, and another on sunstroke, and another on alcoholism, and then in the chapter on congestion of the brain we have a treatise on epilepsy that is not quite epilepsy, and sunstroke that is not quite sunstroke, and alcoholism which has changed so that it is now deserving to be called not alcoholism, but congestion of the brain. But when we ask for evidence that these hazy states of quasi-epilepsy, quasi-sunstroke, &c., are really due to congestion of the brain, we meet with a very difficult state of affairs, very prejudicial to clear dealing with the subject; I mean we are met with a foregone conclusion, a sort of traditional certainty about the matter, as if you ought not to ask for evidence. Believing as I do that there is no such fatal definite disease I find this a very unsatisfactory state of affairs, and I was very glad to see in a recent and very valuable work on medicine, that the author of that work, himself a pathologist of great experience in morbid anatomy, speaks thus of this topic of "congestion of the brain:"—"So many nervous phenomena are commonly referred to congestion or anæmia of the nervous centres that we can scarcely presume to pass over them in silence." One could have wished that the conviction thus evinced had led this distinguished physician to deal more summarily with a doctrine he thus confesses himself forced by common reference to touch upon.

As one finds categorical descriptions of a morbid anatomy of this disease, congestion of the brain standing on the highest authority in our text-books, I cannot ignore them, or merely say there are no such signs, but must deal with the several anatomical appearances which are advanced as showing post-mortem that the brain was congested during life, my position being that there is no valid evidence of the kind. So that I must now trouble you with an examination of the post-mortem appearances which are alleged to prove congestion of the brain. We find writers giving four conditions as showing congestion. I will take them *seriatim*. The first condition advanced is a swollen state of the brain, so that it seems, after removal of the calvaria, almost too large for the cavity which contained it. The dura mater seems tightly stretched over it, and on reflecting this the convolutions appear broad and flattened, and the sulci less obvious. Now here we have evidence of swelling of the brain. But as to our power of drawing any conclusion from such a swollen state, it is curious that the description makes no allusion to hypertrophy of the brain, which is treated of elsewhere in the same work, and is known only by its causing a general enlargement of the whole brain. I have never seen such hypertrophy, but the flattening described has very frequently come under my observation, and my impression is that in no instance did I ever meet with such flattening unless some obvious cause of expansion of the brain has been present, in the form usually of an increase of the intraventricular fluid, or else of apoplectic bleeding, or of tumour, in which case the swelling and flattening are more localised. The next evidence mentioned is the distension of veins and capillaries with blood; the veins are tortuous and varicose; the grey matter dark. Both this and the white matter show

abundance of bloody points and gorged vessels, and this description finishes by saying: "It is extremely difficult to draw the line, and say what is morbid and what is consistent with health." Now, it is better—nay, it is necessary—to say firmly that it is not only extremely difficult, but it is simply impossible, to draw the line, and say what is consistent with health. Indeed, by bringing in the idea of health when the person is dead we confuse the issue, and I should not mention this except to remark that the visible state of affairs at the post-mortem examination is the point that concerns the morbid anatomist, and not the inferential state of affairs during life and health. For this is not any longer at all in the question, which question is whether the mode of dying, the position of the body after death, or the manner of making the inspection will not determine the appearance of extreme overfulness of the vessels in the brain of the dead person independently of the conditions which were antecedent to all this and led to his having so to die. Can we infer from the amount of blood in the brain after death the amount during life? Perhaps one could not find a more decisive answer to this question than the answer given by Kussmaul and Tenner. These observers were investigating the effects of ligature of the cervical vessels, and it was most important for their purposes that they should be able to estimate the resulting anæmia of the brain by post-mortem examination. Their experiments were very numerous. They were testing the results of a simple mode of treatment of the brain; they had it in their power to place the bodies in any position they liked, or in any circumstances of temperature, &c., and they knew accurately the conditions actually allowed. This is what they say as the result of their investigations:—"We could never deduce any results from the post-mortem examinations undertaken with a view to determine the state of fulness before death of the most important parts of the vascular system—viz., the arteries and arterial capillaries, and even in the most favourable instances when similar inquiries were directed towards the veins, our results could only be looked upon as approximate. It appears, therefore, to us to be especially necessary to study carefully the state of the brain circulation in asphyxia, narcosis, intoxication, etherisation, &c., in the living animal according to Donders' method—that is, by insertion of a watch-glass into the skull."

Now, if this is the result when the conditions before and after death were determined and known, how can it be said that the amount of blood found after death in the human brain will show the amount present before death when the conditions before and after death were undetermined and unknown? Again, why should we take the amount of blood found post mortem in the brain as a criterion of the amount present there during the disorders that led to death, when the amount of blood present in other parts after death cannot be taken to indicate the amount present before the act of dying? It may be necessary here to examine the exact bearing of evidence in some cases where we appear to accept fulness of blood after death as evidence of fulness of blood before dying. Let us take the most striking example we can choose in which we might be led to suppose that we are in the habit of drawing such a conclusion, and thus do ourselves an injustice. Now, it is true that where organs are situated close to seats of long-continued and positive hæmal obstruction—as for instance, the liver, or stomach, or lungs—when seen after death from heart disease the amount of blood in the vessels of these parts forms a striking feature at the post-mortem examination. We observe great overfulness of the veins, and we know that overfulness existed during life. But it is not because of the amount of blood found there after death that we know there was so much blood there during life. For the amount of blood present post mortem is really only the result of the mode of dying. Death in mitral disease is due to stoppage of the heart under intense engorgement, so that the great vessels near the heart are very full in the moment of death; and remain so afterwards, in the ordinary position of the body, and from this cause there is much blood in the wall of the stomach, and meantime our knowledge of the ischæmic state produced by the cardiac obstruction makes us aware that the same condition existed during life, also the presence of excess of tough mucus or superficial ulceration may give evidence to the same effect. But as to the particular question whether a great amount of blood in the stomach wall after death will serve to show that there was a great amount of blood in it before dying. If we were asked that question we must, I believe, answer it firmly in the negative. Great amounts after death may have been preceded by great amounts before the person began to die, as heart disease shows us, but the stomach may be deeply congested by sudden disease or accident causing asphyxia merely as a manner of dying, so that you cannot, because the stomach is purple after death, say that it was so before dying commenced. The importance of this subject, in many aspects of medical practice, induces me to follow it out fully, because one finds it on all hands assumed, and by the highest authorities stated, that redness of the brain shows congestion, or even inflammation of it. Thus, in a very thorough and able article on tubercular meningitis, we find it said of the membranes of the brain that they show "that great sign of inflammation, redness," and even in works devoted specially to morbid histology the same fallacy is encouraged. Rindfleisch, speaking of acute hyperæmia of the brain, says: "A slight flush of the medullary substance, a faint tinge of red mingled with the usual grey hue of the cortex cerebri, must be taken as very significant indications; where even these are lacking we must not jump to the conclusion that they did not exist during life." Of course the question is not of jumping to negative conclusions, but founding sound positive conclusions, and nothing can be more misleading or wrong than such a statement as that a faint tinge of red mingled with the usual grey hue of the cortex must be taken as a very significant indication. One is tempted to think the author had not looked carefully into the variations of colour to be observed in brains as they ordinarily appear before the pathologist. Faint tinges of red are constantly to be seen in the brains of persons dead from indifferent diseases, and the blood is often very curiously and irregularly distributed under entirely indifferent conditions, marbling and mottling the grey matter with pink and purplish tinges. A section of the cortical grey matter, or more especially of the corpus striatum and thalamus, will convince anyone of this in almost any case. So also it is misleading to speak of "that great sign of inflammation, redness" as appearing post mortem. During life, redness, when associated with swelling, heat, and pain, is at one with these associates in proving the existence of inflammation; but after death the redness which was due to the enlarged scope of vascular play ceases, because vascular play has ceased with life. The consequence is not doubtful, and it is quite certain that after death the redness goes from inflamed and congested parts. Such serious issues may turn upon this point, that I think it very necessary to clearly recognise that no degree of redness, or pinkness, or overfulness of blood about the brain or its membranes can prove that there was any morbid state of the circulation within the head before the act of dying. Death by asphyxia increases the amount of blood in the head, but a dependent position of the head after death, if only for a short time, will cause a similar increase. It should be taught that it is a sign of ignorance to say in a coroner's court that congestion of the brain was found on post-mortem examination to be the cause of a person's death.

Passing on now to the next point advanced as morbid anatomy of cerebral congestion, one finds the description lays down tortuosity and varicosity of the larger veins of the brain as evidence of such congestion. Now, if by this is only meant the bending of the veins through overfulness, it is but a sign of overfulness, and Kussmaul and Tenner have disposed of overfulness for us; but if it is really meant that the veins are varicose, I think moderation of the description is desirable, at least in the several thousands of inspections conducted by me I never saw a varicose vein upon the brain. It is true that we often find the veins thickish and opaque near their endings, but the veins have their share in the general thickening of fibrous parts within the skull in old age. I will take this thickening along with *l'état criblé*, which is given as another proof of congestion of the brain; *l'état criblé* is a perforated look of section of brain usually in the corpus striatum, and due to cutting across of dilated channels, which are dilatations of the channels in which the arteries run. The thickish vein and perforated-looking appearance are signs of senile wasting of the brain such as results in elderly people from a hard life, and results sometimes in younger people from a still harder life in which they may have poisoned themselves with alcohol, or by too much continued stress of emotional existence have been their own poison to the same effect. In the process of ageing the brain shrinks, both as a whole, so as to leave

space between it and the skull, and interstitially so as to allow spaces to form around its internal vessels, giving *l'état criblé* on section. The skull is thus not sufficiently filled, and then everything movable and within reach is drawn upon to fill the vacuum. The call tells first upon the cerebro-spinal liquid, whose function is to supplement the brain in filling the skull. But when the natural amount of this liquid is insufficient the blood must enter, and be retained to fill the rest of the space. But the excess of venous blood thus retained lends itself to encourage the growth of the lower forms of tissue, especially the connective tissues; so that, as a consequence, you get thickening of the membranes, and this appears especially in what I called the tidal area, where the locking system in the veins tells most effectively, and where Pacchionian glands in time appear, the vein walls thickening a little in the meanwhile. Even the cranium itself, having its dura mater kept full of blood, thickens inwards, so tending to reduce the cavity. But as to the question before us, which concerns itself only with the disease called congestion of the brain, what we have to see is that all these things are most gradual and slow effects of chronic shrinking of the brain, producing secondary effects most gradually and slowly. So that it all comes gradually about as a progressive system of events constituting the character of a period of life, and explaining the creeping approach of age, but in no way serviceable to furnish explanation of sudden insensibilities, and other phenomena described as acute diseases, under the title of congestion of the brain.

And, now, let us look at the remainder of the morbid anatomy advanced in support of the supposition that sudden serious illness is caused by rush of blood to the head. The description lastly sets down as such evidence a quantity of blood or hæmatin around the vessels, twisted and varicose capillaries, evidence of bursting of capillaries, orange-coloured spots and specks of crystalline hæmatoidin, and especial stress is incidentally laid on the observation of blood pigment around the vessels in the brains of excitable lunatics. Now, there is no doubt that blood pigment is very frequently met with about unsatisfactory looking capillaries when the brain of any adult is searched through with care. At least I was led to this conclusion when, during the first few years of my office as pathologist to Guy's Hospital, I used to take away about a cubic inch from the neighbourhood of the island of Reil in every brain I inspected. For after the vessels of these portions of brain were washed and examined, the result was such as to assure me that when anyone over twenty-five years of age replies in a satisfied way to an inquiry as to his health, he expresses the truth of the matter only so far as he is aware, and his answer overlooks the condition of a considerable number of the capillaries of his brain, much in the same way as it overlooks the state of his skin at some pimple or perchance the caries of some tooth. In fact, were a pathologist with a great microscope to spy through all our brains as we sit here in states of satisfaction, he would certainly see a great deal in the way of tortuous capillary and dots of yellow pigment—a great deal that under the microscope would look very alarming. But so constant are moderate amounts of the changes now in question that one cannot justly ascribe any peculiar significance at all to moderate degrees of them; and surely experience would suggest great caution in allowing importance to the observation of blood pigment in the brains of excitable lunatics. Because if the amount of pigment was little it is not more than other people have; but if it was much, then would not the question arise whether the excitable lunatics had struck their heads, or perchance received blows in the course of the care they required to have taken of them. Numerous broken ribs are not infrequent signs in asylum anatomy. A great deal of blood may be effused in the brain through blows from which people recover. A fatal hæmorrhage into the brain is nearly always a large hæmorrhage, and many people recover from blows which more or less approach a fatal result without reaching it. Those who recover must then have the moderate amounts of hæmorrhage. I have seen the middle and anterior lobes of the brain stuck fast to the skull and imbedded in old yellow pigment and hæmatoidin, showing that most extensive crushing of the brain had been survived. So that sharp blows or falls upon the head such as everybody not more than commonly fortunate has to suffer at least several times in his life are not without effect in doing more or less to throw out spots of blood here and there for future microscopic observation, to regard as evidences of congestion of the brain. But, besides accidental injury, there are other mischances to the blood through fever with purpuric tendencies, or through morbid states of the blood generally, and to these rather than to any such disease as congestion of the brain or determination of blood to the head, we must be prepared to ascribe those changes in the capillary vessels, and the little spots of blood pigment that are found on careful microscopic examination of the brain. They are the results of all the accidents, little and great, that have made their mark, large or small, on the brain in the course of its life. It must be remembered that blood pigment is probably never removed when once it has been formed, but it remains at the spot as a permanent register of the accident that produced it. I trust I have sufficiently shown that we have no anatomical grounds for believing that there is any malady whose cause is overfilling of the vessels of the brain with blood.

Gulstonian Lectures
ON
ANÆMIA.

Delivered before the Royal College of Physicians,

BY SIDNEY COUPLAND, M.D., F.R.C.P.,
PHYSICIAN TO THE MIDDLESEX HOSPITAL.

LECTURE II.—PART II.

Idiopathic Pernicious Anæmia: Illustrative Cases—Analysis of the Different Forms of the Disease—The term "Idiopathic" not applicable to a considerable proportion—Preponderance in the Swiss Cantons (especially Zurich) largely dependent on Mode of Life—Influence of repeated Pregnancies, Gastro-intestinal Disease, Hæmorrhage, Malaria, and Nervous Disorders in determining a "Pernicious" Anæmia—Pathogeny: Is it due to increased Blood Destruction or want of Blood Formation?—Changes described in Blood and in Bone-marrow (Pepper, Cohnheim, Osler)—Its Relations to Leukhæmia, to "Pseudo-leukhæmia," to Chlorosis.

I WILL now proceed to detail to you the leading features of cases of idiopathic anæmia which have occurred in the Middlesex Hospital during the past ten years. They are not numerous, and they do not comprise all the forms in which this condition occurs, but they will serve to illustrate my subject.

CASE I.—This has already been published,[1] and I will content myself with a brief abstract of it. S. D——, aged twenty-seven, a pale, delicate-looking, but not emaciated woman, married five years, but childless, was admitted under the care of Dr. Greenhow on Sept. 7th, 1871, complaining of pain between the shoulders, palpitation, great weakness, vertigo, depression, and coldness of the extremities. The skin was as white as wax, and there was a faint jaundiced tint of the conjunctiva. The lips were colourless, and the tongue pale, clean, and moist. There was a loud double murmur over the præcordial region, having a friction-like character, and a maximum intensity at a point just inside and a little above the left nipple. There was no enlargement of the liver or spleen, but slight epigastric tenderness attributed to frequent retching. The pulse was 128, very weak, small, and compressible; respiration shallow; no cough; temperature 100·4° F. The urine was acid, of sp. gr. 1013, free from albumen or bile-pigment. Her history was as follows. There was no tendency to hereditary disease; she had had the usual diseases of childhood, and was always rather delicate and subject to palpitation. The catamenia appeared at fourteen, and since then she had had more or less menorrhagia and leucorrhœa. She never, however, had any serious illness till about a year ago, when she began to suffer from diarrhœa and vomiting, with oc-

[1] By Dr. R. King, Brit. Med. Journ., Nov. 25th, 1871, p. 613.

casional vertigo, but did not complain of pain after food, nor did she vomit blood or pass any per rectum. The palpitation now became worse, and was accompanied with pain between the shoulders. These symptoms continued for two or three months, when she got better; but three months afterwards was attacked in the same manner, with the addition of a slight yellow tinge of the skin and conjunctiva, and was again laid up for two months. After this a second remission occurred, and she remained comparatively well till two months before admission, when the old symptoms returned. The progress of the case was marked by increasing debility, constant nausea, and occasional vomiting. On Sept 20th there was some diarrhœa, but neither at this nor at any other time was blood observed in the motions. The pulse, respiration, and temperature remained much the same throughout, the latter never exceeding 102°, and only once descending as low as 98·8°. On October 3rd she vomited during the afternoon and frequently during the night. The sickness continued, and she sank exhausted on Oct. 5th. At the post-mortem examination minute ecchymoses were found studding the inner surface of the dura mater, and a small quantity of slightly turbid fluid coated the surface of a portion of the hemispheres and dipped in between the convolutions. The brain itself was completely bloodless. There were also ecchymoses on the pulmonary pleuræ, a few old adhesions, and some recent lymph on the right side, but the lungs were healthy. The pericardium contained three ounces of fluid and showed no traces of inflammation. Not more than an ounce of thin, pale, and watery blood could be obtained from the heart and large vessels, and that was perfectly fluid and did not coagulate. All the other viscera were examined, but showed only intense anæmia. Dr. King, in his comments on the case, raised the question of the anæmia being caused by a derangement of nervous function, supposing, from the analogies supplied by the act of secretion, that the sympathetic system directly controls the act of blood-formation. He draws a parallel between such cases and those of Addison's disease, where the symptoms are so similar (except the pigmentation), and where the existence of a nerve-lesion is more evident. It is interesting to find Addison stating that "in the case last examined the heart had undergone such a change" (he is speaking of its fatty degeneration), "that a portion of the semilunar ganglion and solar plexus, on being subjected to microscopic examination, was pronounced by Mr. Quekett to have passed into a corresponding condition." But I do not know of any other facts which can be called in support of Dr. King's reasonable hypothesis.

CASE 2.—Emma H——, aged twenty-nine, unmarried, a domestic servant, admitted under the care of Dr. Greenhow, April 20th, 1875. One of her sisters had died of consumption. She herself had enjoyed fairly good health till six weeks before her admission, when she began to feel very tired at her work, which was hard. She had also suffered from occasional vomiting and attacks of fainting, whilst becoming, in addition, paler, and attacked with shortness of breath on slight exertion. She was well nourished, but very anæmic, the skin having a somewhat tawny tint, especially about the neck, axillæ, and back. The mammæ were ill-developed. The heart's action was exaggerated, impulse diffused; visible pulsation of carotids; radial pulse, jerking, 120. A soft systolic murmur was audible at the base of the heart, and a well-marked bruit in the jugulars. There was slightly impaired resonance at the anterior apices of the lungs, and wavy respiratory murmur, but elsewhere the breath sounds were normal. No enlargement of liver or spleen. Urine: sp. gr. 1025, acid; no albumen. The blood showed a deficiency of red corpuscles, but no excess of leucocytes. The predominant symptoms were vomiting and diarrhœa, accompanied by increasing languor and debility. The temperature was irregular, the highest point reached being 102°, on the evening of admission, and the general range being between 100·2° and 99°, the evening temperature being mostly lower than the morning. The pulse ranged between 120 and 140, and was very feeble, during the last two days maintaining the more rapid rate, whilst the temperature fell to 97·8°. She sank exhausted on May 2nd. At the post-mortem examination the general surface and the mucous membranes were noticed to be extremely pale, the skin of neck, axillæ, and groins being of a pale-brown colour. The mammary areolæ were not pigmented, and no pigmentation occurred at the root of the nails. There was a fair amount of subcutaneous fat, and much in the omentum. The pleural and pericardial sacs contained dark-coloured serum. There were a few subpericardial ecchymoses at the back of the heart, which was fairly covered by fat, its muscular substance being pale and flabby. Both sides contained much thin fluid blood, whilst in the right ventricle a thin, pale, soft clot was met with, diminishing towards auricle and pulmonary artery. The lungs were pale and bloodless, slightly puckered and indurated at apices, the posterior part of each lower lobe being engorged with frothy serum. The liver and kidneys were anæmic, but healthy. Spleen small, pale, and tough. Suprarenals natural. Semilunar ganglia appeared healthy, but were not examined microscopically. In the stomach the mucous membrane in the pyloric region was thicker and firmer than elsewhere, white, perfectly smooth, and free from mammillation. The only remark I would make upon this case is that it might as well be described as a case of fatal chlorosis, which it resembled in the mode of its onset, and that the predominance of gastric symptoms was very marked, again suggesting a neurotic basis for the whole disease.

CASE 3.—Henry A——, aged forty-three, single, a potman, admitted under Dr. Cayley's care on Sept. 18th, 1878. His mother had died of consumption, but he had a healthy brother and sister. When ten years of age he was ill with rheumatic fever for eight weeks, and had been subject to rheumatic pains in all parts of the body. For the past three or four weeks he had, however, been getting more sallow and short of breath, and within the past week his feet began to swell. In spite of his occupation he drank moderately. When admitted he was extremely prostrate, but free from pain. His skin and mucous membranes were intensely anæmic, and there was considerable œdema of the lower extremities. There were bronchitic râles in the lungs. The heart was not enlarged, and no bruits were audible; spleen and liver not enlarged. There was some diarrhœa. The urine was of sp. gr. 1015, acid, but free from albumen. After a week's rest the œdema had almost subsided, the diarrhœa ceasing also. The temperature varied slightly, being often above 99°; on Sept. 26th it was 101·8° in the morning. On the night of Oct. 9th he was attacked with temporary aphasia and slight deviation of the tongue to the *left*, but no other paralytic symptom. The temperature was then 100°; pulse very weak, 120; heart's action tumultuous, and a systolic murmur appeared at the base. Next morning he could speak well, and the tongue was protruded straight. Temperature 101°; pulse 108. But the same afternoon he had a similar seizure, when his speech became indistinct, the tongue deviated to the left, and slight paresis occurred on the left side of face and left arm. Temperature 103°; pulse 120. The paretic condition passed away in a few days, but he became more prostrate and drowsy, and died on Oct. 13th. At the post-mortem examination no lesion was found in the brain, which was very anæmic. Hæmorrhagic foci were found in the retinæ. There were some old pericarditic adhesions, much fat on the surface of the heart, and extreme fatty degeneration of its muscular fibres. There were a few subpleural ecchymoses on the surfaces of the lungs, which were engorged in their dependent parts. The liver was paler than natural, spleen pale but soft; pancreas and suprarenal capsules healthy; the kidneys were rather tough. A transient hemiparesis was observed in one of Immermann's cases to which I have referred. In that case also no lesion was discovered in the brain. Possibly in both instances the cause of the nervous symptoms lay in an undetected minute hæmorrhage. In the foregoing case also the large amount of dropsy was unusual, and the kidneys were certainly indurated, but not wasted or fatty. There have been cases where it has been more difficult to decide whether one was dealing with chronic Bright's disease or anæmia simply, and on this ground I have excluded one case which occurred in 1876, of a man, aged fifty, whose symptoms were those of pernicious anæmia, but where the kidneys were more obviously diseased than in the present case.

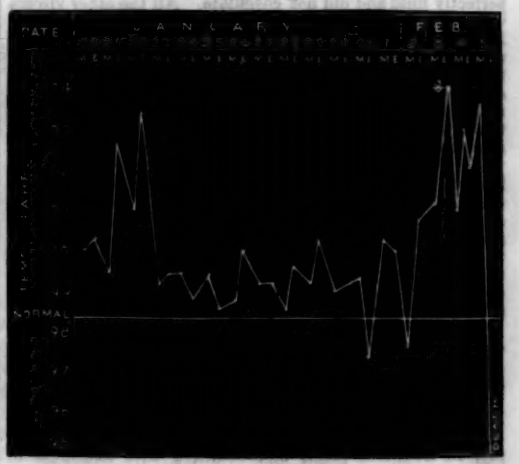
CASE 4.—Caroline F——, unmarried, cook and housekeeper, was admitted under Dr. Cayley's care on June 2nd, 1879. Beyond an attack of "inflammation of the bowels" at the age of twenty-four, she had enjoyed good health, but for the past two years had been ailing, losing colour, getting thin, and suffering from shortness of breath for the past six months especially. She was considerably emaciated, feeble, and anæmic, but her appetite and digestion were good. Beyond unusual visibility of the cardiac impulse, there do not appear to have been any cardio-vascular signs. The anæmia certainly was most intense. On June 9th the

hæmoglobin was estimated at 28 per cent., and the red corpuscles 550,000 per c. mm., or 11 per cent. of the normal. The temperature only rose to 100° and 100·4° on three occasions, being generally normal. There was diarrhœa with occasional vomiting, but neither occurred to a considerable extent; there were no retinal hæmorrhages. Under arseniate of iron she rapidly improved. On August 23rd, the number of red corpuscles was 37·7 per cent., and on September 22nd, the day before her discharge, 2,080,000 per c. mm., or 41·6 per cent. She remained fairly well for more than twelve months—namely, to Christmas, 1880, when her weakness returned. She began to suffer from shortness of breath, palpitation, and occasional vomiting, and was admitted again on March 2nd of this year, having kept her bed for two months. Her skin and mucous membranes are intensely pale, and she complains of great exhaustion, but has a fairly good appetite. The heart's impulse is diffused and thrilling, and a rough systolic murmur is audible at both apex and base, the second sound at the pulmonary cartilage being accentuated. There are also bruits in the carotids and in the jugular, there being further marked pulsation of the jugular vein. Pulse small and compressible; no retinal hæmorrhages. Urine: sp. gr. 1020, acid; free from albumen. The temperature has not risen above 99°, nor the pulse above 100. The case is still under treatment, principally good diet, rest, and arseniate of iron being prescribed. As yet not much progress has been made, for although on admission the red corpuscles numbered only 520,000 per c. mm., or 10·4 per cent. of the normal, and increased nine days later to 620,000, or 12·4 per cent., yet the percentage of hæmoglobin has fallen from 30 to 21. With the increase in the red corpuscles there has been a change in the number of leucocytes, which were to the red as 1 to 52 on admission, and on the 11th 1 to 124. This case must be regarded as one of idiopathic anæmia, although it is lacking in some of the distinctive features, especially the existence of retinal hæmorrhages. The chief point of interest is the improvement which took place during her residence in the hospital eighteen months ago, an improvement which was maintained for upwards of one year. The ultimate prognosis must be considered as uncertain.[2]

CASE 5.—Emil M——, an Italian boy, seven years of age, admitted under Dr. Cayley's care on January 6th, 1880. His father was alive and healthy; and he had one brother also very healthy. The mother had died of puerperal fever after her second confinement. This boy had never been a strong child, and had had scarlet fever four years ago. In the summer of 1879 he began to get very weak and continued in a weak state until Christmas, when he complained of headache, became listless, objected to move about, and did not care to play. At the same time he lost appetite and suffered from a slight cough. He was well nourished, but extremely bloodless, face of a waxy appearance, lips pale. Marked œdema of conjunctivæ. The heart's apex impinged in the normal position, and a soft systolic murmur was there audible. There was also a whirring bruit in the carotid, and a well marked hum in the jugular. There was a slight cough and some scanty moist crepitation at the bases of both lungs, where also resonance was impaired. There were also signs of some ascitic effusion. Urine: sp. gr. 1015, free from albumen. The pulse rate throughout was very rapid, from 140 to 160, and its volume small and compressible. The temperature was irregular, falling from 100·6° on the day of admission to 98·2° the next morning, and then varying between 98·4° and 99·8° until the 12th of January, when it rose to 102·6°, falling to 99·8°, to rise again to 102·6°, after which it oscillated between 100·6° and 100·2°, until his death on the 17th. Restlessness, varied by great drowsiness; frontal headache at times severe, and towards the close cramps in both legs marked the progress of the case, and vomiting occurred on the last two days. There was constipation; never any diarrhœa. There were extensive retinal hæmorrhages and swelling of the optic discs, and on the last day of life he became quite blind. Iron and its arseniate were the remedies employed, and transfusion was entertained but discarded, as the case seemed beyond recovery. At the post-mortem examination the heart was found to be advanced in fatty degeneration, the change being most marked in the left ventricle, the general wall of which was very friable and of a yellow-red colour, whilst the layer of muscular tissue immediately beneath the endocardium—both on the papillary muscles and the parietes—was speckled and streaked by whitish spots and lines. A few opaque patches occurred also in the mitral valve. Both lungs were engorged and purplish in their posterior two-thirds, numerous ecchymotic patches occurring beneath the visceral pleura, and in the substance of each organ; whilst the bronchi contained some blood-stained tenacious mucus. The spleen was pale, its follicles large, prominent, and white. Liver, large, firm; its lobules well-defined, the central part of each lobule appearing as a whitish-yellow ring, giving the organ a curious speckled appearance visible through the capsule. This was due to fatty degeneration. The kidneys were simply bloodless. This was a pure case of idiopathic pernicious anæmia, and is interesting on account of the extreme youth of the patient.

CASE 6. — Elizabeth Y——, aged twenty-one, unmarried, a nurse, admitted under my care on Jan. 20th, 1880. She had had no serious illness, but for some years had had very little colour and had gradually got paler. The catamenia, which commenced between the ages of fifteen and sixteen, became abundant and frequent in August, 1879; and at the same time she became gradually weak, suffered from giddiness, palpitation, and shortness of breath on exertion. She was well nourished, but extremely anæmic, and complained of great weakness and thirst. There was a marked thrill with the impulse of the heart, and a loud, almost grating bruit at the pulmonary cartilage. The apex beat was in the normal position. Temperature 100°; pulse 146. (See Chart 3.) The temperature rose to 102·8° in the evening of

CHART 3.



* Quinine, twenty grains.

the 21st, and, with remission to 101° next morning, was 103·4° the following evening, the pulse still being very rapid, and the patient having sore-throat and headache. The red blood-corpuscles numbered 2,490,000 per c. mm., or 49 per cent. The catamenia, which had been flowing for ten days before admission, continued, passing into profuse hæmorrhage—so much so that in five days the corpuscles fell from 49 to 20 per cent. (Jan. 28th). Dr. Hall Davis was consulted, and, on the failure of plugging to arrest the flow of blood, the long continuance of which was assuming alarming proportions, endeavoured to check it by the injection of perchloride of iron, ergot being given by enemata, as it could not be retained by the mouth. She became drowsy and apathetic; the cardiac bruit increased in intensity; and, in spite of all efforts, continued to lose blood, a very marked rise in temperature being noticed as the anæmia became more and more profound. She died on Feb. 5th, a petechial eruption appearing about the trunk and limbs shortly before death. There was a large amount of subcutaneous fat, and the dark-red colour of the muscles contrasted with the thin and watery blood. There were extensive subpericardial ecchymoses on the surface of the heart, the muscular substance of which, especially of the left ventricle, was very pale, speckled, and extremely fatty. There were purpuric spots also over the kidneys. The ovaries were rather large and fleshy, and contained cysts; in the right was a rather recent corpus luteum. The uterine mucous membrane was

[2] This patient became rather rapidly worse and died on March 25th.

pale and smooth, a minute sessile polypus, the size of a pin's head, showing no evidence of ulceration, occurring at the entrance of the left Fallopian tube. The idea that this was the cause of the hæmorrhage was quite untenable. Indeed, the case might be interpreted as the development of the hæmorrhagic diathesis in a chlorotic subject. The chlorosis preceded the menorrhagia, which in its turn intensified the anæmia, and the uncontrollable loss of blood thus arising could not be repaired. Transfusion was clearly out of the question until that constant bleeding could be stanched.

As I have already remarked, the field of view has been so widely extended since the time of Addison that one is embarrassed by the attempt to analyse the cases which have been recorded as progressive pernicious anæmia. Some of these clearly belong to the category of Addison's cases, others obviously do not; so that in perusing them one is continually being confused by the assumption that we are speaking of the same things. Undoubtedly it will be a great gain when we can once and for all rid ourselves of the term "idiopathic" in medicine. There must be an underlying cause for every departure from the normal mechanism. But the time has not yet come. So far as I can gather, then, the term "pernicious" has been used in different senses, some simply employing it to serve as the expression of the severity of any case of anæmia, no matter how arising; others stamping it with a specific character, going behind the strict meaning of the word, and implying by it that it deals with a form of anæmia which is wholly peculiar, and only lately known. What wonder, then, at the mystery and obscurity which veil the subject? One by one the criteria attempted to be established between this form of severe anæmia and other forms nearly but not quite as severe, have been or are being broken down; the one that most resists explanation being the intractability of the disease to ordinary therapeutic measures. But there are problems concerned in it which remain to be solved. At present I think we are in a position to take this view, that to a considerable number of cases the term "idiopathic" is inapplicable, there being in other words a sufficiency of causes in operation to establish the anæmic condition, but that its *pernicious* and *progressive* characters are impressed on it by changes of which we know nothing, or nearly nothing. It may be urged that this is but begging the question and removing the idiopathic origin a step nearer. It is hardly so, for I think it justifies us in establishing such a classification as this:—

Anæmia	Symptomatic	Simple.
		Pernicious.
	Idiopathic	Simple.
		Pernicious.

Such a classification would be warranted by our present knowledge, and would differentiate between the two main forms of pernicious anæmia, destined like the simple forms, to be merged again into one, when etiology shall be perfected. "Idiopathic" and "pernicious" are not, then, alternative terms, although a large number of the latter fall under the former class. Out of the 110 cases whose records I have studied, in forty no cause has been attributed, or the record is silent on it; in others the alleged cause is too remote and too slight to have influenced the case at all, but the chief causes which are sufficient and which stood in sufficiently close relation to be regarded as causes were these:—1. Bad living and food in eleven cases, often conjoined with other more immediate influences, as pregnancy and lactation, or gastro-intestinal disturbance; the latter no doubt produced by these bad circumstances. It has been pointed out that the great prevalence of pernicious anæmia in the Swiss cantons, especially in Zurich, is related to the impoverished condition of the peasant folk, amongst whom the cases of the disease are most frequently met with. They live chiefly on potatoes and coffee, a diet not conducive to healthy blood, formation, and sufficient of itself to lead to anæmia, even of this fatal kind, and the supervention of further debilitating influences nearly sufficiently explains the occurrence of such anæmia. It is objected to this, that the same causes are in operation elsewhere without such results, and that an endemic influence is quite a gratuitous hypothesis. That when removed from such influences other subjects recover from their anæmia; not so these, who become progressively worse, uninfluenced by treatment. Looking, however, to analogies from other diseases, and our knowledge of etiology in general, it seems hardly warrantable to prolong a vain search after other causes in the face of such self-evident ones as these; and remarkable as is the fact of this limitation of fatal anæmia to small districts, it is not more remarkable than other facts concerning the geographical distribution of many diseases. 2. An even more potent cause, often associated with the first, is *pregnancy*, especially if the woman be submitted to the exhausting influences of rapidly repeated pregnancies. It was the starting-point of the pernicious anæmia in 20, or rather less than one-fifth, of the 110 cases. Abortion is liable to occur, and its occurrence is generally followed by the death of the parent, although there may not have been any great loss of blood. Sometimes repeated vomiting in pregnancy is followed by anæmia of this extreme kind, which may also supervene upon flooding in labour, prolonged lactation—causes often enough of a simple symptomatic anæmia, fortunately seldom of a pernicious. Menorrhagia is a sequel as well as a cause of anæmia, and one of the cases appears to have commenced at the menopause. 3. *Digestive* and *intestinal* disorders appear to be at the foundation of several cases, and this, independently of bad diet in many, but clearly the records show that dyspeptic symptoms, vomiting, and diarrhœa have troubled the patient at the very outset, before the subjective or objective symptoms of anæmia have developed. Frequently, as we have seen, the same gastro-intestinal symptoms appear during the course of a pernicious anæmia. Dysentery and typhoid fever may be followed by an anæmia which becomes pernicious in degree. 4. Malarial influences have been supposed to play a great share in determining the pernicious character, but it is singular in how few cases a distinct history of previous intermittent fever has been obtained, and many of the patients have not lived in malarial districts. Then there are cases in which the profound blood change has been set on foot by direct nervous shock, by fright, grief, or worry. In a word, the *known* etiological factors of pernicious anæmia are those of simple anæmia. The symptoms of pernicious anæmia are those of simple anæmia aggravated and intensified. The effects of pernicious anæmia are the same as those of simple anæmia, carried to an extreme degree.

If we turn now to those cases where it is impossible to detect with our present knowledge any etiological factors for the anæmic condition—if we deal, that is, with purely idiopathic cases,—we are bound to seek for causes within the organism itself. That search has been only in part successful. As in all cases of anæmia a cause must be sought in one of two directions, that of diminished activity of blood formation, or excess of activity in blood destruction, attention must be paid to each of these points, especially as regards the blood and the blood-forming organs. Of these I shall shortly speak.

The degree to which the hæmoglobin may be diminished has not been much estimated; but Quinquad found that when it reached 26·5 grms. per 1000 cc. of blood—i.e., about one-fifth of the normal quantity,—the case was invariably fatal, and then there is also a diminution in the solids of the serum. In this, as in other forms of anæmia, it has not been shown that there is any relation between the number of corpuscles and their richness in hæmoglobin. One of the cases I have related, it will be remembered, gave a diminution of corpuscles to 530,000 per c. mm., or 10·6 per cent., whilst the colour test for hæmoglobin showed that there was 30 per cent. of that substance. The case is proportionately grave, therefore, when the corpuscles and hæmoglobin are *pari passu* diminished. Quincke is inclined to doubt the value of observations on the amount of colouring matter in this disease, believing that some of it is in an inactive state, occurring as the detritus of the corpuscles. Most of his numerations are remarkably low—e.g., in four cases, $\frac{1}{3}$, $\frac{1}{10}$, $\frac{1}{15}$, and $\frac{1}{21}$ of the normal, the last being a case in which recovery took place, and the temperature chart of which is before you (No. 2). Many observers have met with variations in the size and form of the red corpuscles. Such variations include corpuscles larger than natural; others much smaller and spherical—the so-called microcytes, at first regarded by Eichorst as pathognomonic of pernicious anæmia, but since abundantly disproved, for they may be absent, and certainly occur in simple anæmia; and numerous smaller and misshapen bodies. Quincke laid especial stress upon alterations in shape; and I place before you a copy of his drawing which gives an illustration of the multiplicity of shapes and variations in size which the corpuscles may be found to undergo. Similar changes are described and figured by Dr. Finny, and have been observed in other cases, of which I may mention one, for the notes of which I am indebted to Dr. Pye-Smith. Irregular massing of corpuscles, rather than

a tendency to form rouleaux; rapid appearance of crenation; pear-shaped, biscuit-shaped, globular forms; an excentric position of the depression on the surface of the globule, or the readiness with which the colouring matter accumulates in the corpuscle at one part, so as to give the corpuscle a nucleated appearance, are amongst the alterations observed after the blood is shed. They indicate a greater proneness to form-changes than in healthy blood, perhaps determined as much by altered quality of serum as by any integral change in the corpuscles themselves. At the same time the predominance of small forms and what appear to be broken fragments of corpuscular matter point either to an accumulation in the blood of imperfectly formed elements allied to M. Hayem's hæmoblasts, or, on the other hand, to evidences of the disintegration of the corpuscles.

Since neither the spleen nor lymphatic tissues show any evidence of change, the discovery of the blood-forming function of the bone-marrow by Neumann has naturally led to its examination in cases of pernicious anæmia, but with results both positive and negative. Dr. William Pepper of Philadelphia, in 1875, was the first to offer this explanation of this obscure disease, and described definite changes, chiefly of small granular cells in the marrow of the radius and sternum in one case. Cohnheim in the following year also described a condition of hyperplasia of the bone-marrow, fat being almost entirely absent, and the marrow of a red colour. Besides ordinary marrow and lymphoid cells he found a large mass of small red corpuscles, a few fully formed ones, and an abundance of nucleated red corpuscles of various sizes, some of which were found in the blood itself. The next most important contribution is that by a member of this College—Dr. Osler, of Montreal—who in two cases, one in conjunction with Dr. Gardner and the other with Dr. Bell, made a very thorough examination not only of the blood but of many of the bones of the skeleton. The marrow was of a violet-red colour and almost destitute of fat, containing besides the ordinary elements a large number of nucleated red corpuscles, similar to those described by Neumann as transitional forms between lymphoid cells and red corpuscles. Dr. Osler,[3] in examining the marrow of the long bones in fourteen cases of chronic disease, found evidences of a similar hyperplasia in only one case. Others have confirmed these observations; and others, again, have not been able to show any such changes in the marrow, whilst Eisenlohr,[4] finding that the alterations in the blood and marrow, similar to those described, were met with in a case of cancer of the stomach as well as in one of pernicious anæmia, is inclined to regard these conditions as dependent on the cachectic state rather than the cause of it, and a similar opinion has been expressed by others.

The question, however, cannot yet be entirely disposed of, and there is no *primâ facie* reason against a myelogenic anæmia sometimes occurring. If it do occur, then it points to defect in the normal evolution of the corpuscles, and we have the strange concurrence of appropriation of material by a blood-forming organ and development of the corpuscles up to a certain point, but no further. Meanwhile research is also being prosecuted in the other directions—viz., increased destruction of blood elements, Quincke finding large quantities of iron deposited in the liver, kidneys, and pancreas, in one or two cases of this disease; but his observations, as well as the solitary observation of Dr. Finny as to excess of iron in the urine, require further confirmation before being finally accepted. Further, I may remark that, in two cases of Quincke's, the total quantity of blood was estimated by a simple process of calculation of the corpuscular richness before and after transfusion, and it was found in these cases to have fallen to 5 per cent. and 4·34 per cent. of the body weight, the normal being 8 per cent.

In conclusion, one cannot fail to be struck by the broad resemblance in the midst of difference that exists between the course of a fatal idiopathic anæmia and leukhæmia and Hodgkin's disease (or pseudo-leukhæmia, as it is called)—a resemblance due to the factor common to all of them: the diminution of the oxygen-carriers of the blood. In leukhæmia there may be both an increased production of white corpuscles and an incomplete conversion of them into the red. In Hodgkin's disease, or pseudo-leukhæmia, there may or may not be any leucocytosis, but there is certainly deficient formation of red corpuscles; and in idiopathic anæmia there must be either such deficient formation or an excessive consumption of these same elements, so that there is no sharp line of demarcation between the two. Similarly in chlorosis we have a disease, the characteristic of which appears to be an imperfect evolution of the blood, and except in a few instances it does not seem possible to distinguish chlorosis from idiopathic anæmia. I must not, however, be contented with this mere assertion, and propose, therefore, to speak of chlorosis in its relation to idiopathic anæmia at the commencement of my next lecture, when I hope also to enter more fully into the effects of the anæmic state.

[3] Gardner and Osler, Case of Progressive Pernicious Anæmia. Montreal, 1877.
[4] Deutsche Arch. f. Klin. Med., xx., 1880.

ON GASTROSTOMY.

WITH TWO SUCCESSFUL CASES, ONE FOR CICATRICIAL AND THE OTHER FOR CANCEROUS STRICTURE.[1]

BY THOMAS BRYANT,

MEMBER OF THE COUNCIL AND FELLOW OF THE ROYAL COLLEGE OF SURGEONS, SURGEON TO AND LECTURER ON SURGERY AT GUY'S HOSPITAL.

THE case to which I draw attention is one upon which I performed the operation of gastrostomy on August 3rd, 1880, for cicatricial stricture of the œsophagus. The patient was a girl, aged twenty-two, named Lydia C——, admitted into Guy's Hospital under my care on July 15th, 1880. It seemed from her history that she had been healthy and steady up to January, when from some domestic trouble she, with suicidal intentions, took half a wineglassful of sulphuric acid. Medical advice was at once obtained, and an emetic was said to have been given, and after the lapse of a certain number of weeks the soreness of her mouth and pharynx disappeared. Difficulty of deglutition, however, was soon experienced, and steadily became worse, so that for some weeks before admission she had lived entirely on liquids, and these were swallowed with great difficulty. Indeed, it took her almost an hour to swallow half a pint of milk.

When the patient came under my observation she was pale, emaciated, and feeble, and although I made many attempts to pass a bougie or catheter down the œsophagus I never succeeded, the instrument invariably being stopped at the upper orifice of the œsophagus, behind the cricoid cartilage. Under these circumstances I determined to open the stomach, and operated on August 3rd. The operation was performed with the patient under the influence of the anæsthetic mixture and under the carbolic spray. It was commenced by an incision three inches long, running obliquely below the margins of the left ribs, and the skin and muscles were consecutively divided down to the peritoneum; all bleeding vessels were twisted, and capillary oozing arrested by a hot sponge. The peritoneum was then divided, and the left lobe of the liver, which became visible, was pressed upwards. The stomach was then readily found, and brought well forward to the surface of the wound. Great care was observed to keep the parts well sponged, to guard against anything passing into the peritoneal cavity. Two loops of fine carbolised silk were then introduced through the peritoneal covering of the stomach, about a third of an inch apart, and with these and a pair of tenaculum-pointed forceps the stomach was kept *in situ*. The ends of the loops were left long. The stomach was next carefully fastened by a series of interrupted sutures to the margins of the skin around. The sutures merely included on the one hand the peritoneal covering of the stomach, and on the other neither included the parietal peritoneum nor the divided muscles, but the skin alone. The stomach at this stage of the operation was not opened. During the next five days the patient was fed by nutrient enemata every three or four hours, and enough morphia was administered subcutaneously to give rest. The wound was covered with lint saturated with terebene and oil. No sickness, elevation of temperature, pain, or other trouble followed the operation, and on the sixth day the stomach was opened. The opening made was very small, not more than the eighth of an inch long. It was made by elevating the stomach by means of the two loops which had been introduced through the peritoneal covering of the stomach at

[1] Read at the Harveian Society, March 17th, 1881.

the first stage of the operation where the ends had been left long, and cutting with a narrow tenotomy knife from loop to loop. The loops were then removed. The patient did not feel this part of the operation.

An indin-rubber tube, with its end cut obliquely, was then introduced into the stomach through the small orifice, which it dilated, and some milk was poured into the stomach through a funnel. After this the patient was fed regularly through the artificial gastric orifice, and the case went on in all ways well. The girl in three months had gained 19 lb., or about a pound and a half a week. For some weeks after the operation she was fed upon minced meat and pancreas made into a pulp, and this thick food was readily passed into the stomach by means of a simple apparatus, which may be described as a small valveless Higginson's syringe, with one tube fitted with a funnel for the introduction of the food, and the other cut obliquely to facilitate its introduction into the stomach through the artificial orifice, the patient with her finger and thumb so nipping alternately the respective ends of the tube when the syringe is compressed as to prevent regurgitation.

I should say that this apparatus, which was made by my dresser, Mr. Studer, enables a patient to be fed on thick instead of liquid food. The patient has been able to take fluids by the mouth since the operation, and to swallow small crumbs of bread or sponge-cake, but I have not yet been able to pass any tube into or through the stricture. It is to be noticed that there has not been under any circumstances the smallest escape of the stomach's contents through the artificial opening, and this is demonstrated by the healthy aspect of the orifice and of the parts around. This happy result is doubtless due to the smallness of the orifice which I made, and the elasticity of the walls of the stomach; the artificial opening yielding readily to the introduction of the obliquely cut end of the tube, and closing on its removal by its own elasticity.

The advantages of this condition are obvious: the patient is saved the annoyance necessarily appertaining to the escape of the stomach's contents, as well as the local distress and irritation which the escape of gastric juice always causes. She is, moreover, able to take her meals standing or sitting with little trouble and without inconvenience; indeed, with all truth, it may be said that the patient is now, eight months after the operation, in the enjoyment of excellent health, and with the exception of the loss of some, though not all, of the pleasures of the table, there is nothing in her condition either to shorten life or to render it less valuable.

Remarks.—The operation of gastrostomy is applicable to two chief classes of cases—to those of stricture or obstruction of the œsophagus from cancer, and to those of cicatricial stricture. In the former class the operation is not curative, but palliative; it is undertaken mainly with the view of prolonging life, and secondarily as a means of diminishing the agonies of a death from starvation. In the latter class it is undertaken with the view of saving life. In the former class consequently the results of past experience are neither over-brilliant nor encouraging, since out of thirty cases tabulated by M. Verneuil up to 1879 twenty-two sank within the first week, and two alone survived the operation a month. One, however, was then living five months after the operation. It is to be remembered, however, that up to the present time the operation has almost always been postponed too long—that is, it has been only entertained when the patient was literally at death's door, and undertaken with the view of palliating the tortures of a death from starvation, and under these circumstances it is not to be expected that grand successes should be recorded.

Were the operation undertaken earlier better results would be obtained; and I have the records of an unpublished case of my own before me, which shall be appended to this paper, in which the patient survived the operation more than eight weeks; and my colleague, Mr. Howse, tells me that four cases upon which he has operated lived from five weeks to seven months. If, however, the operation were undertaken, as I hold it should be, as soon as the diagnosis of the case is made, and as soon as the obstruction is marked enough to prevent the deglutition of solid food, better results would be obtained; for by such a practice the patient would be in a better condition to undergo the ordeal, the stomach would be less atrophied, and consequently a better organ to deal with; the miseries of hunger would be guarded against, for they would be anticipated; and above all, the progress of the cancerous disease in the œsophagus would be rendered less rapid, and its disintegrating changes would be postponed, in the same way as surgeons now know by the operation of colotomy cancerous stricture of the rectum is relieved, and the changes in the cancerous growth are retarded if not prevented.

In the second class of cases where the operation had been undertaken for cicatricial stricture better results are to be told, for Verneuil's case lived seventeen months and died of some unknown disease. Trendlenberg's case was living three years after the operation. My colleague, Mr. Howse, had a case two years ago which still lives, and the present case promises to demonstrate still better the value of the operation, for the patient is not troubled, as all the others have been, by the escape of the contents of the stomach from the artificial orifice and the consequent local soreness and irritation which such an escape entails. And this leads me to make a few remarks on the operation itself. The incision I made, and believe to be the best, is an oblique one about three inches long and half an inch below the borders of the left ribs. The tissues should be divided carefully down to the peritoneum, and everything like bleeding should be stopped before the peritoneum is opened. The stomach as soon as caught should be brought well forward into the wound and held with a pair of tenaculum-pointed forceps; two loops of carbolised silk should then be introduced, about half an inch apart, through the peritoneal covering of the stomach and its subserous tissue, to indicate the spot at which, on some future day, the artificial opening is to be made. The stomach is then to be carefully stitched to both edges of the skin wound by a number of fine stitches passed through its serous covering alone, in the same way as Nélaton suggested in the operation of enterotomy for abdominal obstruction. There does not seem to be any necessity to include in these stomach sutures the divided parietal layer of peritoneum, the edges of which naturally fall against the wall of the stomach, which is well brought forward. The patient is then to be left alone, and fed by nutrient enemata, to allow the stomach rest and time to unite with the abdominal wound, and after the lapse of from three to five or six days, according to the necessities of the case, the stomach should be opened. In this case I completed the operation of opening the stomach on the sixth day. The full credit of this suggestion is due to my colleague, Mr. Howse, and I have adopted the practice in two cases after witnessing its benefit in several instances. I believe this method of operating has great advantages and tends to make the operation safer. The opening into the stomach should be very small; in the present instance it was no larger than the width of a tenotomy knife, and yet experience has proved that such an opening is elastic enough to allow of the easy introduction of a tube equal to three-eighths of an inch in diameter, and to prevent the regurgitation of even a drop of liquid from the stomach. The stomach having been opened the patient was fed at once, for the first few days with milk, eggs, and beef-tea, but later with beef and pancreas minced and cooked by a simmering process till the whole was almost liquefied. At first a tube and funnel were used, but later on the thick food was more readily introduced by a simple apparatus [shown and described]. The girl can now take liquids by the mouth, and a little solid. Still no tube can be passed or opening formed into which any probe can be passed. Under such circumstances there is but little prospect of her doing without artificial feeding.

By way of conclusion let me urge upon my medical friends to suggest a resort to gastrostomy in cancerous obstruction of the œsophagus so soon as the diagnosis is made, and there is practical difficuty in the deglutition of solid food, for by an early operation many more lives would be prolonged, and much misery saved. The progress of the disease, moreover, would be greatly retarded. Whilst in cicatricial stricture the operation should be resorted to only when all hope of the stricture being dilated has vanished, and there is no other alternative.

Cancer of Œsophagus; gastrostomy; death two months after operation from extension of the disease to the trachea, lungs, liver, and mediastinal glands.

(Reported by Mr. HIND.)

J. B——, aged sixty-one, a labourer, was admitted into Stephen ward on Feb. 25th, 1880, under Dr. Wilks' care. Patient has enjoyed good health; never drank much. Has had gonorrhœa, but not syphilis. Ten months before patient first noticed difficulty in swallowing solid food. It appeared

to stick in the œsophagus on about a line with the upper end of the sternum. He subsequently was unable to swallow his food, and vomited it immediately. His appetite has remained good. He has not suffered much pain. On admission he has apparently lost much flesh; his skin is hot and dry. He has a circumscribed fluctuating tumour situated over the inner half of left clavicle, not infiltrating the skin; it is not painful, and the patient had never noticed it. A few small glands are enlarged at the lower part of the posterior triangle of the neck. About a fortnight ago an abscess formed on the dorsum of the left foot, which is very red and inflamed. Tongue moist, furred, and white. Teeth not good, only two left in the upper jaw. Bowels open.

Feb. 26th.—House-physician passed a bougie down the œsophagus, but it did not pass lower than on a level with the upper part of the sternum. To take one ounce of brandy three times a day, with eggs.—March 2nd: The tumour is 3" long by 1½" deep; feels elastic and soft, and at anterior end is soft and fluctuating. Deficient entry of air all over the chest; chest expands tolerably; no dulness; no signs of invasion of thorax by growth; breathing hoarse all over chest. The house-physician passed a large, then a small bougie, both to about 4½" below epiglottis, corresponding to a point immediately above the sternum.—6th: Fluctuation of swelling; opened by Mr. Bryant, and four ounces of pus came away.—10th: One ounce of brandy to two ounces of milk as an enema.—11th: Mr. Bryant performed first part of operation of gastrostomy, as described in the last case. The wound healed kindly without any peritoneal or other complications.—16th: Operation completed; opening into the stomach a small one.—17th: Temperature normal; fed every two hours with four ounces of milk and an egg, and half an ounce of brandy occasionally.—18th: Injection every four hours; temperature normal; bowels open; tongue fairly clean.—19th: Abscess on foot opened.—22nd: Temperature normal; fed six times a day, two of which consist of milk and eggs, the remainder of meat; about four or five ounces of brandy; weighed 98 lb.—23rd: Leg put on back splint.—25th: Up in a chair in ward.—27th: Fed four times a day.—April 21st: Weighed 103 lb.—May 5th: Cough troublesome; weaker.—10th: Died.

Necropsy by Dr. HILTON FAGGE.—Body much emaciated. A slight sore on one instep, and in the abdominal wall was a fistula to the left of the umbilicus from the operation of gastrostomy. The opening was in the centre of a small amount of scar tissue. It was the size of a No. 10 catheter, and above—that is, the upper margin had upon it an overhanging lip, which looked more like mucous membrane than skin or scar. The cranial bones were normal; no thickening. Dura mater and sinuses, arachnoid and pia mater, were normal. Arteries of head very atheromatous at base. The brain weighed 50 oz. In the head of the outer nucleus of lenticular ganglion upon the right side there was a small-sized cyst of an old apoplexy; its colour was brownish, and its lining membrane smooth, and in its walls were some small vessels. The smaller vessels in the interior of the brain did not look so very thick.—Spine: The spinal vertebræ had various nodosities upon their anterior margins at the line of junction with the intervertebral substances in the lumbar and dorsal regions.—Respiratory organs: Recent lymph over hinder part of left pleura. Both had in various parts, particularly over the hinder part of the lower lobe and in the outer part of the upper lobe, a considerable infection of the lymphatics with cancer. They stood out on the surface as interlacing lines of milk white or yellow colour, forming a rectangular latticework. There were, in addition, in some parts, flat plates of growth spreading in the pleura from these. The lungs felt very solid towards the root. On section they were seamed in various parts by thin lines of cancerously infiltrated septa. These had a head in appearance in various parts, and in the centre of the lung this condition was surrounded by a granular pneumonic lung, which it was difficult to say was not pneumonia. It may have been pneumonia mixed with growth. The heart weighed eight ounces and a half, and was quite healthy. The œsophagus was tightly strictured opposite the second ring of the trachea. There was very little thickening of its coats, but on slitting up the tube there was a jagged white growth in the mucous membrane, without any well-defined margin, and, in addition, a superficial ulcer in the mucous membrane, which ran up vertically in the covering of the thyroid and cricoid cartilage to the left side for more than an inch. The floor of this ulcer presented no cancerous attributes, but the edge of the ulcer was distinctly raised and everted with a soft fleshy growth. The trachea was not perforated, but its wall was extensively implicated. On looking at the mucous surface of the trachea the whole of it, down to the bifurcation, looked mottled and thick, and granular-looking tubercles of growth studding it all down, and from these parts the disease had invaded the external parts. The thyroid body was extensively infiltrated with a similar growth. The glands were affected, but they were not much enlarged. The actual stricture of the œsophagus was not more than half an inch in length. Above and below the parts were normal.—The liver contained three or four small circular, firm, cancerous nodules; in other respects the liver was healthy.—The intestine was in a very interesting condition. Throughout the whole length of the small intestines, but chiefly in the lower part, were ulcers which had rather thick edges, which tended to run round the bowel, and which exposed clearly in the floor the muscular fibres of the bowel. One of these had gone deeper, and by a second ulceration in the already ulcerated surface had all but perforated by a transverse slit, two-thirds of an inch long. The ulcers externally had a puckered aspect, but there was no material narrowing of the bowel, and one at least had very minute white grain-like bodies (? tubercles) in the subperitoneal tissue. I think it was an early tubercular affection of the lymphatics in the floor of a chronic ulcer. Near the cæcal valve the ulcers became more irregular and more superficial—not like any particular ulcer—and similar small superficial circular and oval ulcers ran down in the large intestine for some distance. But there was one additional peculiarity in the large bowel. The mucous membrane was smoother than usual, and sanded over with multitudes of small rough-looking grains, distinctly projecting from the surface. I hesitated to pronounce an opinion on its nature. They were too prominent, and abruptly so, for solitary glands. No lardaceous disease of liver or intestine.—Spleen: The capsule was thick. The suprarenal capsules were healthy.—The kidneys weighed eight and a half ounces. One kidney was very good. The other contained many cysts of small size, but its cortical structure was good.—Most of the joints showed osteo-arthritic changes. The toes were nodular at their edges. The knees had a large part of their surface from centre outwards devoid of cartilage, and eburnated; while at the margin of the cartilage there came a nodose edge of bone. The elbows were in a similar state. The synovial membrane in knees could hardly be said to be vascular. The shoulders were also affected, the left bicipital groove being markedly prominent from new matter under the muscular attachment of outer lip.—With regard to the ulceration of the intestine, I was in doubt as to its nature. The ulcer in some parts certainly involved part of Peyer's patches, and further they were well-defined, clean-looking ulcers, exposing the muscular coat without any granulations—in this resembling typhoid ulcers which had sloughed out, and not tubercular ulcers. On the other hand, the peritoneal aspect was in no other places in favour of tubercle. The stomach at the seat of operation was firmly united to the skin. No signs of peritonitis were present.

A CASE OF CYSTICERCUS CELLULOSÆ IN THE VENTRICLES OF THE BRAIN; SUDDEN DEATH.

BY FREDERIC FLINT, M.D.

A BOY in his seventeenth year, a pupil in a large boarding-school at Scarborough, apparently in good health, played on Thursday, Feb. 24th, at a well-contested game of football. On Friday at 10 A.M. he was no more. He took an active part in the game on Thursday, and thoroughly enjoyed it; in the evening he complained of headache, and went to bed early; he vomited once or twice during the night, but did not disturb another boy who slept in a separate bed in the same room. On Friday morning he did not appear at the breakfast-table, and the head-master of the school went immediately to see him. He then complained of his head aching severely, and of having vomited, and the terrible scene, which came to so speedy an end, began. The poor boy made several heart-rending, piercing

cries, clapped his hands to the *back* of his head, and cried for pain there; his eyes became fixed as if he were going into an epileptic fit; he began to pick and pull rapidly at his eyes and mouth, then to scratch his skin violently as if he would tear his flesh off, especially about the inner part of the thighs and the pudenda, so that strong force was needed to prevent him doing himself injury. He then buried his head and body under the bedclothes, and in agony tried to bore his head into the bed. He several times drew his knees up to his chest, and violently thrust his limbs out again; there then followed severe shudderings of the whole frame, which, to use the expression of one who most patiently and carefully attended him, "seemed to make all the bones in his body shake together." After a piercing shriek, the case at this stage mercifully passed into coma, with stertorous breathing. At the time of my arrival his face was of a bluish, epileptical colour, the pupils widely dilated, the respiration gasping and at prolonged and lengthening intervals, and the pulse full and strong. While I was feeling the pulse and meditating on the case, in a few seconds it became flickering. I injected ether into the arm, but it had no effect on the pulse, and within two or three minutes of my arrival life vanished away. The whole duration of the seizure was about one hour. I ascertained that there was twitching of the small muscles of the face in the early stage, but it was not very marked; tears poured copiously down the cheeks during the greater part of the time.

On making closer inquiries into the previous history of the deceased, I was informed that he had been at the school for about five years, that he had always taken an active part in the school games, that he had been considered clever and of more than average mental ability, and that he had been of a very generous character, and a favourite with his companions. During the time he had been at school his health had been generally good, but during the latter part of the Christmas term, and since his return after the vacation, he had shown signs of being fagged by his work, and had complained of headache after much study and violent exertion, as after playing at football. During the holidays in endeavouring by skating backwards to pass under a bridge, which could be done only by stooping, he came into collision with the bridge and hurt his spine. This was supposed to account for the headache and complaints which he made after playing at football on his return to school, and he was advised by his associates to discontinue playing for a while. It was not, however, considered needful to take any medical advice about it. The boys also noticed that he had lately been somewhat irritable, and not disposed to give them much help on various occasions as he had previously done. I could not find out that he had ever complained of giddiness or had attacks of vomiting. I was told that about Easter (1880) he had had very severe neuralgia, which affected not only the face but the back of the head, and severely so; the facial neuralgia was relieved by the extraction of carious teeth, but the pain in the back of the head continued for some time, and only gradually subsided. Nitrous oxide gas was administered for the extraction.

As the real cause of death was unknown, apoplexy being so very unusual at such an age, it was considered necessary in the interests of all parties that there should be an inquest, and in this case an inquest proved helpful to the cause of science, for no one, I think, would have ventured to ascribe the death to a cysticercus, especially after he had heard of the skating accident.

An inquest being ordered I made a post-mortem examination of the brain the same evening. I found the coverings of the brain and the venous sinuses gorged with blood; the pia mater was intensely congested, and on cutting into the brain immediately beneath it there were numerous minute spots of hæmorrhage. On opening the left lateral ventricle I noticed it was distended with fluid, but I did not observe anything of special importance. I then opened the right lateral ventricle, and began to feel puzzled as to the cause of such a rapid and intense congestion of the brain. On searching the left ventricle more carefully I discovered what appeared to be a piece of elongated jelly. Wondering what it could be I put it into a glass of water, when it assumed a globular form, and I saw at once that I had secured a prize. I put it on one side for further examination, and searched the third ventricle and the passage to the fourth, but I could discover nothing more. As I was unaided, the time late, and the light only that of a candle, I did not venture to open the abdomen and intestines. This I afterwards very much regretted; but those who are acquainted with the difficulties in performing a post-mortem in a private house, and under the circumstances in which I was placed, will not be severe in blaming me. On examining the cyst I observed that in water it was of the size of a moderate-sized cherry, that it was translucent, and that there could be seen in the interior an opaque body. When placed on a saucer it looked very like a miniature jelly-fish of a light-brown colour, rather larger than a shilling, and in the centre of it there was a yellowish-looking spot, at which there appeared under a magnifying lens, to be some projecting hooklets. At the inquest I gave it as my opinion that the cyst which I exhibited was a cysticercus cellulosæ, and that it was the cause of death. It would be interesting to decide the exact position which the cyst occupied in the brain. I found it in the left lateral ventricle. I did not observe it at first sight, but after opening the right lateral ventricle on searching again in the left I discovered it, and it was then certainly not attached to any part. I think that it must have been about, and possibly engaged in, the foramen of Monro, and that in pressing on the corpus callosum and septum lucidum, to open up the right ventricle, the cyst was dislodged, and pushed into the position where I afterwards found it.

In Ziemssen's Cyclopædia there is reported a case which is very similar to mine. A boy, strong and hearty, had suffered from frequent headaches the year before his death. The headaches came on after violent bodily exertion, and were sometimes accompanied with vomiting, but were never so severe as to require medical attendance. One evening he had a headache, but he ate a hearty meal, and went to sleep. After a few hours he awoke with vomiting, delirium, and great restlessness. His speech was inarticulate; complete loss of consciousness and death soon followed. A cysticercus cellulosæ was found lying free in the aditus ad infundibulum. There were no teniæ in the intestine.

In the account given by Heller of the development of the cysticerci, the head of the worm is described as being downwards in the cyst, and it is stated that in but few cases does the tapeworm head escape externally while in its measly condition. How it could do so is not described.

As the case appeared to be a very interesting one, and as when I opened the cyst the worm appeared of a large size, I determined, instead of further dissecting the specimen myself, to send it to an expert; and as we have in the profession a man of European and world-wide reputation in such matters, I sent it to Dr. Spencer Cobbold, feeling sure that he would make it more interesting and instructive to the profession and the scientific world than I could do.

Dr. Cobbold very carefully examined the worm, and kindly made me a drawing of the head, and sent me a very interesting account of his examination. He stated that in his opinion the parasite was a cysticercus telæ cellulosæ hominis, and "that it is particularly worthy of remark that not only is this bladder-worm of most unusual size, but it is likewise of monstrous character. In place of four it is furnished with six cephalic suckers." When he examined the worm without a magnifying lens he expected it would prove to be an example of the cysticercus tenuicollis. "For," he writes, "it is altogether beyond my experience to have met with any pork-measle of the size of this human specimen." After examining the hooks, of which four or five still remained attached, with the quarter-inch objective he satisfied himself "that the hooks corresponded more closely with those of the ordinary pork-measle than with the hooks of the slender-necked hydatid. . . . . When fully unrolled, and the head everted, the specimen measured precisely two inches in length." Dr. Cobbold has already drawn the attention of the profession to this case in THE LANCET (March 12th), and will show the specimen at the Quekett Club meeting. In a subsequent note Dr. Cobbold states that the appearance of hooklets protruding through the cyst wall was deceptive, and that the head was still concealed in the receptacle when he examined the specimen.

A question of great interest now presents itself. How did this embryo find its way to the brain? As I understand it, such a case could not arise *directly* from swallowing a pork-measle; that as the pork-measle arises from the introduction to the pig's stomach of a mature egg or an egg-filled segment of the tænia solium, so the bladder-worm in man arises from the introduction to man's stomach of a mature egg of the tænia solium either from without, with food or drink, or from within by vomiting from the fully developed segments of a tapeworm in the intestine—i.e., by self-infec-

tion. No doubt this case is defective, as the intestines were not examined; I have, however, made careful inquiries, and I cannot hear that the youth ever made any complaint of having passed anything unusual by the bowel, and if the worm had been fully developed in his intestine there can be little doubt that he would have passed some segments, and that they would have attracted his attention. Heller, in Ziemssen's Cyclopædia, states that of von Gräfe's collection of eighty cases of cysticerci in the eye, only five or six patients had been previously affected with tapeworm. It would therefore appear that the embryos usually find access to the body in the food or drink. It would be practically useful to the profession and to the public if such an authority as Dr. S. Cobbold were to take advantage of the interest excited by this case to point out the many ways by which the embryos of the tænia solium may gain admission to the human body.

Scarborough.

THE TREATMENT OF PSORIASIS BY PYROGALLIC ACID.

BY GEORGE THIN, M.D.

THE first notice of the curative effects of pyrogallic acid as an external application in psoriasis is, I believe, to be found in a paper by Jarisch, which is known to me by an extract in Schmidt's Jahrbücher, 1880, No. 3. In this paper a ten per cent. ointment, to be applied twice daily, is recommended, the ointment to be kept in contact with the skin by a bandage in inveterate cases. Jarisch found its use attended with no inconvenience, and states that the discoloration of the skin which it causes is removable by benzole and by dilute acids. The utility of pyrogallic acid in psoriasis has been supported by the testimony of Kaposi, who has warmly recommended it, more especially for cases of psoriasis universalis.

Before trying it on my own patients I became, however, aware through a case reported by Neisser, to which I shall again refer, that its application to a large surface might be attended with danger, and feeling satisfied that it is never justifiable in the treatment of ordinary cases of psoriasis to subject a patient to any risk, however insignificant, I commenced by using it over a very small extent of surface at a time. A slight experience of this treatment was sufficient to satisfy me that we had become possessed of a powerful agent for the treatment of psoriasis, and one that is not attended by the inconveniences that are associated with the use of chrysophanic acid. I accordingly availed myself of a favourable opportunity for testing its action, as compared with that of some of the more commonly used stimulants which are applied to the skin in psoriasis, and now propose to record the results of the experiment.

A young gentleman, aged twenty, consulted me in March, 1880, for a psoriasis of long duration. He intended going abroad for a period of years, and was desirous of ascertaining the best method of keeping his disease in check without resorting to repeated courses of arsenic. He therefore willingly accepted my suggestion of trying the effects of different applications on different patches.

The disease first appeared on his elbows when he was five years old. When he was twelve the knees became affected. In his eighteenth year the disease became more general, patches developing on the legs, abdomen, back, and arms. When I saw him I found the knees and elbows affected with patches, varying in size from that of a shilling to the palm of the hand, on various parts of the body. They were mostly about two inches in diameter and rounded in form, and were well-marked examples of the disease, a slightly bleeding surface being left when the scales were forcibly removed. The other applications with which the pyrogallic acid was to be compared were frictions with soft-soap twice daily, the frictions on a number of selected patches being followed by the application of white precipitate ointment and *huile de Cade* respectively. A complete cure was not obtained by these applications on any one patch, although an apparent attempt at recovery followed all of them. Thus the elbow and knee of one side were treated by the soap frictions and white precipitate ointment, and those of the other side by soap and tar (*huile de Cade*), from March 19th to October 21st, continuously and actively, with great amelioration of the condition of the skin, but without a complete cure. Patches on the abdomen and back were similarly treated for a number of consecutive weeks, again with progressive amelioration, but the progress was so slow that, in deference to the wishes of the patient, the pyrogallic acid ointment was substituted. The pyrogallic acid was first applied to an oval patch on the left leg, which was about four inches long and three inches broad, an ointment composed of one part of the acid to ten of lard spread on lint, being laid on it twice daily. After three days' application the local irritant effects produced were sufficiently severe to induce me to discontinue the remedy for the time being. The treatment of the patch was resumed after some weeks with a weaker ointment, one part of the acid to twenty of lard. In six days the patch looked much better, and within a fortnight it was well.

In order to avoid any possible ill effects from the acid a few patches only were treated at a time. Those on the abdomen were attacked first, and then those on the back, and finally those on the limbs. The treatment was begun in the end of May, and by the end of July all the patches, except one or two on the back, had been cleared, and these soon yielded when they were taken in their turn. Finally, on October 21st, the elbows and knees, which had so long resisted the patient treatment by soft soap, white precipitate ointment, and tar, were attacked by the pyrogallic acid in the same strength of one in twenty, and were speedily cured.

The curative action of pyrogallic acid is due, I believe, simply to its irritant qualities, and to certain properties as an irritant in regard to which we are ignorant. The irritant effects are most conspicuous around the hairs, each hair-follicle being the seat of a small brown patch, which, when it is scratched off, often leaves an abrasion in its place. At one stage of its curative action the mode in which the psoriasis patch enlarges is well illustrated, the dull-brown epidermis which marks the extent of the diseased surface being bounded by a thin red margin. This thread-like border corresponds to the vascular congestion produced in the bloodvessels by the extension of the psoriatic epithelium.

Kaposi has treated patients who were subjects of universal psoriasis by an ointment of pyrogallic acid applied to the whole surface of the body, and remarks in his recent handbook regarding the "alarming appearance of strangury and excretion of olive green to tarry urine, with symptoms of moderate fever and prostration, by many patients whose whole bodies had been repeatedly covered by it." Neisser (in the *Zeitschrift für Klin. Med.*, i., p. 88) recites a case in which a patient died from its effects. The patient, a man afflicted with psoriasis universalis, after a warm bath with soft soap, had an ointment of pyrogallic acid applied to the left side of the body and to the surface of the chest. In two hours he became unwell, and had diarrhœa, and four hours later rigors, collapse, high temperature, and tremor set in. After a remission there was in forty hours a repetition of the attack, and he died comatose. There was anuria for the last twelve to eighteen hours. During the sixty hours of illness only 1600 cubic centimetres were secreted, the urine affording a marked example of hæmoglobinuria.

It is clear that the remedy is one to be cautiously handled, but it is equally clear that, used in the strength employed by me in the case which I have related, and used over a small extent of surface at a time, it can be employed not only safely, but conveniently and successfully.

Queen Anne-street, W.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The Weekly Board have just presented their thirty-second annual report to the governors. During the past year the total number of patients attending the hospital was 12,976. The number of in-patients amounted to 1372; included in this number are 71 infectious cases treated in the fever wing. The average daily number of in-patients was 114. Cost per head £4 7*s.*; cost per bed occupied, £52 5*s.* 9*d.* Average stay in hospital, 33 days. Cost per out-patient, 2*s.* 3*d.* The income from all sources amounted to £7048 3*s.* 7*d.*, and the expenditure to £6924 8*s.* 4*d.*, leaving a balance in hand of £123 15*s.* 3*d.* During the coming summer it is intended, if the funds are forthcoming, to erect a new and detached mortuary and to renovate the sanitary appliances and drainage, as well as to paint and cleanse the interior of the building.

ORCHITIS AS A CONCOMITANT AND SEQUEL OF MEDITERRANEAN FEVER.

BY G. F. DUFFEY, M.D. DUB., F.K.Q.C.P.I.,
PHYSICIAN TO MERCER'S HOSPITAL.

UNDER the above heading Surgeon H. M. Ellis, R.N., Royal Marine Artillery, has recorded in a recent number of THE LANCET (Jan. 22nd, 1881, p. 161) some cases of particular interest. Independent observations of rare forms of disease are always valuable, especially when—as would appear to be the case in the present instance—the observer is unaware that the subject to which he calls attention has been previously studied and described by others.

Having had the honour of serving for five years at Malta with the 1st Battalion of the 24th Regiment, I had exceptional opportunities, of which I endeavoured to avail myself, of studying the forms of fever met with in that island. The special complication or sequela of which Mr. Ellis reports four cases I was, to the best of my belief, the first to give a detailed description of (*Dublin Journal of Medical Science*, Feb. 1872). I ventured to define the affection as "an inflammation of the testicle of a rheumatic character occurring sometimes during, or a short time after, convalescence from fever," and the description given by Mr. Ellis corresponds accurately with the symptoms observed in the cases, eighteen in number, on which my memoir was based.

The fact that several officers of the Army and Naval Medical Departments who have served at Malta have not seen orchitis there after fever, as well as my own experience, would make it appear that this complication has somewhat of an epidemic character; the tunica vaginalis testis, and not, as usual, the aponeurotic and muscular structures of the thighs or back, being, at certain seasons, or under certain unknown conditions, the seat of this "rheumatic" or "neuralgic" complication. Thus Senator (Ziemssen's Cyclopædia, vol. xvi., p. 20), referring to my observation as to the occurrence of orchitis during convalescence from endemic fever in Malta, asserts that it is quite possible that under special climatic conditions other febrile maladies besides scarlet fever, dysentery, and the puerperal state, during or after which polyarthritis is exceptionally prone to occur, may likewise predispose the system to become affected by rheumarthritis; the liability of the patients to become thus affected varying in different epidemics, but being also possibly due—apart from any *genius epidemicus*—to the state of the weather and other circumstances of a local order. Nearly all my cases occurred during the autumn and winter of 1867, while the men were quartered in an unhealthy barrack.

From the considerable experience I have had of the so-called "Maltese" or "Mediterranean" fever, I cannot agree with Mr. Ellis that it is of a remittent type, unless it has changed its character since 1871. In the paper above referred to I gave it as my opinion that there were two main forms of fever endemic in Malta—viz., ephemeral fever or febricula and enteric fever. Nothing that I have learned practically or read on the subject since has made me change the views I then expressed.

Reference to the literature of the subject shows that orchitis is not unknown out of Malta as an occasional complication of typhoid fever. Liebermeister (Ziemssen's Cyclopædia, vol. i., p. 181) states that in men orchitis or epididymitis sometimes supervenes during convalescence from this disease in a proportion, as far as he can judge, of one in 200 cases; and Hanot (*Archives Gén. de Méd.*, Nov. 1878) has reported four cases of orchitis in typhoid fever. In all these instances the right testicle, as is most frequently the case, was affected, and the complication occurred during convalescence from the fever. An army medical officer informed me some years ago that he had had orchitis after fever in India; he also suffered from "rheumatic" pains during his convalescence, but was unable to account for the orchitis until some years subsequently he casually read my paper, which, he said, exactly described his condition at the time.

Fitzwilliam-place, Dublin.

NOTE ON

THE TUNING-FORK IN THE DIAGNOSIS OF DISEASES OF THE EAR.

BY E. CRESSWELL BABER, M.B. LOND.,
SURGEON TO THE BRIGHTON AND SUSSEX THROAT AND EAR DISPENSARY.

IN a very interesting paper on Bone Conduction read by Dr. Knapp at a meeting of the American Otological Society in July last, and in the report of the discussion which followed,[1] I find no mention of a phenomenon bearing on this subject to which my attention was directed more than a year since. I refer to the effect of pressure exerted on the ear on the perception of the tuning-fork. On applying a sounding tuning-fork to the median line of the head, if one meatus be closed (either by inserting the finger into it or by pressing the tragus inwards), the sound of the fork, which on closing the ear lightly is heard loudly in the obstructed ear, if the finger be pressed inwards diminishes in the closed ear with the amount of pressure exerted, until the sound is heard only slightly or not at all louder in the closed than in the unclosed ear. The same takes place with the voice if any note be continuously hummed. In examining persons with normal hearing in this manner, I found that pressure has usually (though not invariably) this effect. In this experiment, the air in the meatus becoming condensed, doubtless forces inwards the membrana tympani and with it the ossicles. In the present incomplete state of our knowledge in regard to bone conduction, as to how far a direct transmission of sound waves through the cranial bones to the labyrinth can take place, or how far bone conduction reaches the labyrinth through the medium of the tympanic apparatus (vide Knapp and others, *loc. cit.*), this phenomenon admits, I think, of two interpretations. 1. It may either be considered due to the inward pressure of the ossicles, causing slight pressure on the labyrinth fluid, by which the functions of the labyrinth are temporarily interfered with; or (2) it may be attributed to the impediment to the vibrations of the ossicles (especially of the stapes), produced by their altered tension. In addition to either of these two causes (or possibly a combination of the two), the fact of the sound waves, which are reflected from the obstruction in the meatus, having to pass through a tympanic apparatus of which the tension is abnormal, probably weakens their effect on the labyrinth. The effect of pressure on the ear may perhaps be analogous to what occurs in those cases (of which several were referred to at the above meeting) in which bone conduction being abolished, it is more or less immediately restored when the tympanum is relieved by inflation or paracentesis. Opinions as to the cause of this phenomenon also varied. Practically it is well to be aware of this effect of pressure on the perception of the tuning-fork if closure of the ear be employed in conjunction with bone conduction as a means of diagnosis.[2] By showing the ease with which altered tension of the ossicles may affect the bone conduction, this observation may assist in explaining some of the exceptional cases met with in practice, in which, although the disease is apparently in the middle ear, the tuning-fork is *not* heard louder in the more affected ear. The whole question of bone conduction, however, needs a thorough reinvestigation, and this is especially required on account of its great practical importance in the diagnosis between middle and internal ear-deafness. The effect of pressure on the perception of the tuning-fork cannot fail to have been noticed before, but it has not, I think, received the attention that it deserves.

Brighton.

[1] Some Remarks and Observations on Bone Conduction. Transactions of the American Otological Society, vol. ii., part 4, p. 407.

[2] Hinton (Questions of Aural Surgery, p. 61) cautions against using pressure in occluding the ear, unless it is expressly intended to note the effects of pressure, but does not mention what these effects are.

ARTS EXAMINATIONS.—At the recent preliminary examination for the diploma of Membership of the Royal College of Surgeons, which was conducted as usual by the College of Preceptors at Burlington House, there were 372 candidates, of which number 124 were rejected; the 248 successful candidates can at once commence their professional studies.

STRYCHNIA POISONING DURING THE FIFTH MONTH OF PREGNANCY; RECOVERY.

BY ALBERT S. MORTON, M.R.C.S.

AT 11 P.M. on Feb. 5th I was hastily summoned to Mrs. H——, who was said to have taken poison. On my arrival, at 11.20 P.M., I observed the following symptoms: Convulsions, risus sardonicus, opisthotonos, redness of face, dilatation of pupil, scratching the body and limbs, free perspiration, bleeding from the mouth, and a bitten tongue. The pulse varied frequently and suddenly, being sometimes normal as to beat, sometimes slower than normal, and at times nearly twice as fast as normal; it varied also as suddenly and remarkably in volume, being at times almost imperceptible, and at others normal or very full.

The convulsions came on five minutes after taking the poison, and continued during the space of two hours. During the first hour they occurred with more or less regularity every four or five minutes. Their strength may be judged from the fact that there was marked opisthotonos, and the tongue was bitten through. During the second hour the convulsions became less frequent, and at the end of the first hour and a half they appeared to have entirely ceased. Half an hour after this (that is at the end of the second hour) the patient asked for a glass of cold water, which I gave to her. On attempting to raise the glass to her mouth she had another severe convulsion, and dashed the glass out of her hand. During the intervals the patient was clear and collected, and then told me she had taken the whole of a large packet of Battle's vermin-killer dissolved in a tumbler of water (probably about three grains of strychnia).

The treatment consisted in the administration of twenty-grain doses of sulphate of zinc dissolved in eight ounces of warm water, and followed by warm water alone, until vomiting occurred. As soon as the sickness ceased the same treatment was pursued until four doses had been administered in all. I was obliged to pour the emetic down with a table-spoon, as the attempt to drink from a tumbler or cup appeared at once to induce a convulsion.

The patient told me during the intervals that her face felt stiff, that she could not swallow well, as her throat was also stiff, that she itched all over, that she had a burning sensation in her throat, and that she would not have taken the poison at all if she had known how painful it would be.

She has not yet had any signs of a miscarriage, and has made a most perfect recovery.

Kennington-park-road, S.E.

CASE OF REMOVAL OF LARGE CYSTOMA OF OVARY, FOLLOWED BY DISAPPEARANCE OF A UTERINE MYOMA.

BY LAWSON TAIT, F.R.C.S.

THE following case was under the joint care of Mr. Badley and Mr. Messiter of Dudley, with whom I saw the patient in consultation upon July 24th, 1879.

E. D——, single, aged thirty, had severe uterine hæmorrhage and had been noticed to be rapidly increasing in size. A tumour had been discovered by Mr. Badley about a fortnight previous to our consultation. At the time I first saw her we resolved the condition into the presence of two tumours, one cystic and the other, down in the pelvis, solid. On July 31st I performed abdominal section and removed without much difficulty the cystoma. The solid tumour in the pelvis proved to be a myoma in the posterior wall of the uterus, which I could not remove. She recovered from the operation without a bad symptom and went home on Aug. 15th. I saw her on October 10th of the same year, and found the myoma reduced to less than half the size it was at the time of the operation. She was married in December, 1879, and in October, 1880, came to me to know if she was pregnant. There was no difficulty in determining that she was about five months pregnant, and not a trace of the myoma was to be discovered. I am informed by Mr. Messiter that she has recently been confined without any trouble.

This is one of a number of cases from which evidence is accumulating in my hands to show that uterine myoma depends very frequently upon disease of the ovaries, and that removal of the diseased glands cures the myoma. In this case it is remarkable that removal of one ovary was sufficient to secure this desirable end, whilst the other remained sufficiently healthy to enable her to become a mother.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

[OPHTHALMIC DEPARTMENT.]

SYMPATHETIC PTOSIS, PROBABLY FROM DECAYED TEETH.

(Under the care of Mr. POWER.)

E. C——, an unmarried woman, aged thirty-three, formerly a domestic servant, was admitted on Dec. 5th, 1880. She was the subject of marked ptosis in both eyes, the ciliary edges of the upper and lower lid being in complete and even apposition on both sides. There was no wrinkling of the skin or other sign of spasm of the outer portions of the orbiculares. She was quite unable to open her eyes, and when pressed to try to accomplish this there was usually marked spasm of the orbicularis oculi, together with contraction of the anterior bellies of the occipito-frontales muscles and horizontal wrinkling of the forehead. On opening the lids with the fingers considerable orbicular spasm ensued; but when this resistance was overcome the condition of the globe was found perfectly natural, its movements being more free, of normal extent, and visual acuity $\frac{20}{20}$. There was no sign of paralysis. The spasm of the orbicularis was most marked when the patient knew she was being observed, and when her attention was directed to it. She, however, complained of a "nipping" sensation coming on at irregular times, and referable to this spasm. This condition had only come on a fortnight before, but she stated that in 1879 the left eyelid was in the same condition, and got well in a short time. Her general health was good; catamenia regular, but painful. It was considered at first that this was a case of hysterical ptosis, and in support of this it was found that the patient did occasionally, when she thought herself unobserved, partially raise her upper lids. She was one day placed under the influence of chloroform, having been previously informed that on coming to herself she would find herself able to open her eyes. While under chloroform her eyes were bandaged. When she recovered consciousness she was assured that she was cured, and the bandages removed. On telling her to open her eyes, she did so widely for a moment, and then relapsed into her old condition. She was ordered shower-baths and tonics, and afterwards valerianate of zinc and assafœtida without any benefit. Her forehead and eyelids were then faradised for ten minutes every morning. This was continued f r about ten days, and then abandoned because she refused to submit. The actual (benzene) cautery was applied momentarily to the superciliary eminences without effect. Strips of plaster were attached to her lids and forehead, and covered with collodion. This kept her lids open for a time, but the strapping becoming loose, the ptosis recurred, though to a trifling extent less than previously, for there was now a palpebral fissure of about one-sixteenth of an inch. Thinking the irritation of the stumps of numerous decayed teeth might be the cause of her complaint, Mr. Power ordered them to be extracted. This was accordingly done at two sittings, the patient being under the influence of gas and ether. The ptosis thenceforward steadily diminished in

both eyes, but to a most marked degree in the left. Ten days from the extraction of her stumps—nine in number—the palpebral fissure was wide enough to expose more than half her cornea, and she could see to read and to find her way about without any bending back of her head.

EMBOLISM OF THE ARTERIA CENTRALIS RETINÆ.

(Under the care of Mr. VERNON.)

R. H——, aged seventeen, a well-nourished and healthy girl, awoke one morning with pain in her right eye, which she found was blind. She visited the hospital next day. The pupil of the right eye was dilated and insensitive to light, that of the left side reacted well. On ophthalmoscopic examination the optic disc was found to be hazy, its margins ill-defined, the retinal vessels exceedingly small, almost invisible at some spots, at others filled with small dark clots. On the following day effusion was noticed round the "cherry spot" at the site of the macula lutea. The effusion looked like a bluish-white mound, with a dark red centre. She had no perception of light in the right eye. The left eye was normal, and its pupil reacted well to light. The effusion round the yellow spot or disc increased for some days, and a small hæmorrhage appeared at the outer margin of the disc. The whole fundus appeared almost a facsimile of the picture in Liebreich's Atlas. This effusion gradually disappeared. The cherry spot first extended, so that at the end of the first week the white clot in the fovea had become obliterated. At the end of a fortnight the disc was very white, its vessels extremely small, the whole fundus dark, and a trifle hazy where the effusion had been. After three weeks she said she could appreciate light with her right eye; no further improvement, however, took place. Her blood was examined by Dr. Harris, and found normal. Three and a half years ago she suffered from rheumatic fever, followed in a month by chorea. She was then in the hospital, and on referring to the notes of her case it was found that there had been no cardiac affection. On examination, however, the first sound of the heart was found prolonged and rough at the apex and audible behind. Two years ago she had an attack of scarlatina, which was followed by chorea. Her catamenia were regular, and there were no symptoms of embolism in any organ but her eye. Neither did she at any time present constitutional symptoms of such an event, unless, indeed, adopting the theory of Kirkes, we look upon the two attacks of chorea as evidences of cerebral multiple embolism.

ECTOPIA CENTRUM; IRIDODONESIS; MYOPIA AND OLD CHOROIDITIS.

(Under the care of Mr. VERNON.)

F. P——, aged nine, a thin but well-nourished girl, of healthy appearance, was admitted complaining of dimness of vision. Her sight had never been good, but appeared now to be growing worse. The external parts of the eye and its appendages were natural. The pupils were dilated, and the irides trembled, especially at their upper parts, in a most marked manner on the slightest movements of her head. The anterior chambers were deep. On focal illumination the right iris was seen to be finely fringed at its pupillary margin, and one or two very fine darkish-coloured bands or filaments crossed the upper and outer part of the pupil in a direction downwards and inwards. The catoptric test gave three images, and it was not until direct examination was made with the ophthalmoscope that the crescentic edge of the partially dislocated lens could be seen crossing the upper and outer part of the pupil. The space between this and the iris was too narrow to permit of the fundus being examined through it, and it also accounted for the fact that the patient had no monocular diplopia or polyopia. There were large posterior staphylomata in both eyes. Her vision was, when unaided, only equal to the seeing of large objects and counting fingers at a foot and a half, and could only be improved by —8 D v —18 D in the two eyes respectively up to $\frac{20}{70}$. There was no history of injury or of any inflammation of the eyes. The cause of the dislocation was obscure. It might have been congenital, as in the cases recorded by Mr. Dixon in the London Ophthalmic Hospital Reports, vol. i., p. 55, and it further resembled these cases in the presence of myopia. On the other hand, the evidences of past choroiditis and the filamentous bands crossing the pupil suggested a pathological cause—viz., the weakening and relaxation of the ciliary processes by choroido-iritis, probably intra-uterine and syphilitic.

CUMBERLAND INFIRMARY, CARLISLE.

TWO CASES OF WOUND OF THE WRIST-JOINT TREATED ANTISEPTICALLY.

(Under the care of Dr. LEDIARD.)

FOR the following notes we are indebted to Wilfrid Wilson, M.B., and Archibald H. Veitch, M.B.

CASE 1.—Joseph H——, aged twenty-four, a dyer, was admitted on October 8th, 1880, suffering from a wound of the wrist-joint, which he had got when shifting a strap in connexion with a drum which works the beetles. His hand was caught by the strap and drawn into a pulley. The wound extended across the posterior aspect of the wrist. The tendons of the extensor communis digitorum, the extensor carpi radialis longior and brevior, the extensor indicis, and the extensor secundi internodii pollicis were torn away from their muscles and were hanging out of the wound to the extent of two inches. The other extensor tendons escaped. The joint between the radius and the first row of carpal bones was completely laid open, and the hand was dropped to a right angle. The cartilage of the scaphoid bone was lacerated and covered with dirt. The radial artery, as it lay between the extensor carpi radialis longior and the extensor primi internodii pollicis, was laid bare to the extent of an inch, but was uninjured. The amount of blood lost was small. The man was taken into the operating-room to have his hand amputated, but Dr. Lediard decided to make an attempt to save it. The wound was thoroughly washed out with 1 to 20 of carbolic lotion; the edges were drawn together with carbolised silk, and it was dressed with the ordinary antiseptic gauze dressing. A trial was made to unite the divided tendons, but the muscles were too far retracted. Evening temperature 100·8° F. On the 9th the wrist was dressed; the wounds were looking well. Morning temperature 99°, evening temperature 100°; the anterior splint was applied. On the 10th the morning temperature was 99·8°.—11th: Temperature normal. On the 13th the limb was again dressed; temperature normal.

After this date the wound was dressed weekly. The temperature remained quite normal.

On November 22nd the wound was quite healed, and the patient was discharged. He was able to extend both joints of the thumb, and the second and third phalanges of the fingers, but not the first phalanx. The mobility of the wrist was perfect. He went to work after providing himself with a leather support laced round the wrist and palm.

CASE 2.—Jane O——, aged fifteen, was admitted Dec. 1st, 1880, with wounds of the palm of the hand and anterior aspect of the wrist which had been inflicted about an hour before by a biscuit machine. There was a semicircular wound about an inch and a half in length over the lower end of the radius, penetrating deeply into this bone throughout its entire breadth, and dividing the radial artery. Immediately below this wound was another smaller one, which completely opened up the scapho-radial articulation. A wound over the ulna divided the ulnar artery. There was a deep circular wound in the centre of the palm, and between this and the wounds on the wrist a similar one, which divided the annular ligament, the central flexor tendons, and the median nerve. There were numerous small wounds on the fingers. There was a moderate amount of hæmorrhage. The radial and ulnar arteries were ligatured with catgut and the wounds were syringed out with 1 to 20 of carbolic lotion for half an hour. A few silk stitches were inserted, and it was dressed antiseptically. The wound was dressed daily, and the temperature remained normal till the evening of December 5th, when it rose to 101°; at the same time the patient complained of pain in the forearm. On Dec. 6th the morning temperature was 101°. When the wound was dressed the radial wound was inflamed, and redness extended up the forearm, owing to the discharge not having a free exit; the stitches were removed. On the 7th the morning temperature was 100°. The wound was again dressed. The pain had left the forearm, but persisted in the hand; sensibility to touch was absent in the hand, except in the fourth and half of the ring fingers. On the 8th the wound was dressed and the temperature was normal. On the 14th sensibility to touch was partially restored in the hand; the pain still persisted.

After this date the wound was dressed weekly. On the

20th several pieces of tendon about an inch and a half long came away from the palmar wound. On Dec. 28th sensibility was quite restored in the hand, and the pain had left the palm. On Jan. 23rd all the wounds were quite healed. The mobility of wrist was perfect. The patient had slight power of flexion in the fingers, most marked in the forefinger. She was discharged Jan. 26th, 1881.

TOXTETH WORKHOUSE HOSPITAL, LIVERPOOL.

STOKES'S SUPRA-CONDYLOID AMPUTATION.

(Under the care of Dr. LYSTER.)

FOR the following notes we are indebted to Mr. N. Roberts, M.B., C.M., house-surgeon.

T. N——, aged sixteen, was admitted on Dec. 20th, 1879, said to be suffering from erysipelas of the left leg. The previous history of the patient was that he had recently been discharged from a fever hospital, where he had been treated for typhus. He said that on admission into the fever hospital he had a little pain in this leg, which seems to have been due to a sore on one of the toes, resulting from the friction of a badly-fitting boot. It soon became evident, after admission into the Toxteth Hospital, that there was inflammatory mischief going on in the shaft of the tibia. Free incisions down to the bone were made, and the usual treatment for such a condition adopted with marked relief to the patient temporarily, but without materially affecting the progress of the disease, which now assumed a more chronic aspect than heretofore. Ere long it became evident that the bone was dead, and it only remained to wait for a separation of it from the living tissues, the boy being kept the while in as good a condition as good diet, cod-liver oil, and tonics could induce. By the month of May the condition of the leg was much worse, and it was telling so much upon the general health of the boy as to suggest operative interference. The whole leg below the knee was very much swollen, with a large number of sinuses leading down to the new bone, through the cloacæ in which the dead bone could be felt by means of the probe, but the soft tissues of the limb were so involved, and their vitality so low as, together with the general condition of the patient, to make sequestrotomy a doubtful procedure, and to suggest amputation as the proper course to be adopted.

The particular operation resolved upon was Stokes's supra-condyloid amputation of the thigh, which was performed by Dr. Lyster on June 3rd with highly satisfactory results. The operation was performed under strict Listerian antiseptics. The anterior oval flap containing the patella was easily obtained, and the cartilage of the patella was removed without much difficulty by the aid of the saw, supplemented by that of the bone forceps. The femur was divided three-quarters of an inch above the articular surface from the patella, the surface of section being the dense cancellated tissue of the end of the bone. The vessels were tied by catgut ligatures, and a somewhat troublesome capillary oozing was controlled by deluging the flaps with hot carbolised water. The anterior flap was turned down, so that the patellar surface, denuded of its cartilage, was closely apposed to the sawn end of the femur, which apposition was further secured by means of a strong catgut ligature through the dense structures about the bones. The wound was closed by catgut ligatures, drainage-tubes were introduced, and the usual antiseptic dressings were applied. The patient was put to bed, and a sixth of a grain of morphia injected subcutaneously. The patient slept for five hours that night.

On the following morning the temperature was 99·8°, and in the evening 100·2°.

On June 5th the temperature in the morning was 99·8°; evening, 99°. From this time forward the temperature never rose above 99°.

The dressings were changed the day following the operation and on three other occasions before they were altogether discarded, which took place June 17th, the wound having then entirely closed with the exception of a slight superficial abrasion, and this healed up in a few days. The stump was entirely free from pain, even on moderately rough handling, at this early date. Two months after the operation he left the hospital, having been kept for some time so as to get used to his wooden leg, the stump being as perfect as any stump could be, and his general health excellent.

Remarks.—A point of some interest in this case is that an intractable disease seems to have been lighted up in the bone by an attack of typhus, in a lad otherwise healthy. This is sufficiently out of the common to merit notice. On dissecting the leg, the entire shaft of the tibia was found to be necrosed and encased by the new bone, whilst the condition of the soft tissues showed that amputation was the only course that could have been pursued with any success.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Combined Carcinoma and Adeno-fibroma of the Breast.—Hyaline Myxoma of Breast.—Cranium and Brain from a Hydrocephalic Adult.—Dermoid Tumour of Soft Palate.—Lupus Erythematosus.—Squamous Epithelioma of Upper Jaw.

THE ordinary meeting of this Society was held on the 5th instant, Dr. Wilks, F.R.S., President, in the chair. It will be seen that a great variety of specimens were shown.

Mr. RUSHTON PARKER showed a specimen of Carcinoma and Adeno-fibroma of the Breast from a married woman, forty-two years of age, who came under his care in October, 1880. The growth had been noticed for three years. It occurred as a movable mass, the size of a walnut, in the upper part of the left breast; the nipple and lymphatic glands being free. He excised the growth, but as after removal it showed evidence of being cancerous, the whole gland was removed. The age of the patient and the size of the growth were in favour of its being cancer, nor was its duration inconsistent with this view; but its mobility was in favour of its being a chronic mammary tumour, and had the patient been under thirty it might well have been thought to be of that nature. In dissecting the breast from the subjacent fascia a small bursa was met with, into which projected a white nodule of adeno-fibroma. The structure of the main mass was that of adeno-fibroma, wavy fibrous tissue between acini and ducts; but in another lobe columns of aggregated cells within an alveolar stroma reproduced the characters of carcinoma. He supposed it was rare to find such a combination, but Langhans had recorded two cases; and he wished the specimen to be referred to the Morbid Growths Committee.

Mr. PARKER then showed a specimen of Hyaline Myxoma of the Breast, which had been noticed by the patient for about seven or eight years. It attained the dimensions of a good-sized orange, and occupied the upper and outer corner of the breast. It was a lobulated, gelatinous, opalescent-looking growth, with a central cyst, and several smaller cysts with intracystic growths. Some of the lobes were of a yellowish-white appearance, others glistening. Microscopically it was a pure adeno-myxoma, and was peculiar in its hyaline character, differing from the more common variety of the softer chronic mammary tumours, with myxomatous stroma. He also showed some microscopical specimens of Adenoma of the Breast. One was from a patient sixty-three years of age, and showed fibro-alveolar arrangement with spaces containing sebaceous material varying in size from a pin's head to half the diameter of a pea. He remarked that increasing pathological knowledge showed that these growths were not so rare as used to be thought. Another specimen was of an intracystic protrusion from a simple cyst of the breast. It appeared as if a sort of hernia of the mammary gland substance had occurred into the cyst in consequence of a blow. He also showed section of an adenoma of the tongue. It grew at the back part of the organ in a young woman, and was a pure adenoma—a very rare disease. Another adenoid growth was one which grew between the skin and mucous membrane of the nose of a man sixty-seven years of age. It was of three or four years' duration, and exhibited round-celled infiltration between the acini.—Mr. BUTLIN said that the portion of the growth under the microscope in the first case was undoubtedly car-

cinomatous. A pure adenoma, such as one of Mr. Parker's specimens, was very rarely met with. The figure given by Rindfleisch of "adenoma" seemed to him to be carcinoma, for the acinus was filled with cells. In an adenoma the acini are lined by epithelium, and not filled with it as in carcinoma.

Dr. BRAILEY exhibited the Cranium and Brain of a Hydrocephalic Adult, which had been presented to the Museum of the Cambridge University, and dissected by Mr. Anningson. The subject was a woman, fifty-three years old, who died of pleuro-pneumonia. For the last nine years she had been an inmate of a lunatic asylum, and for some time past had suffered from attacks of vomiting and epileptiform seizures. The bones of the extremities and thorax were small and ill-developed, and there was a lateral curvature of the spine. She had possessed a certain amount of intelligence, being able to converse and sing hymns; and was of violent temper. The cranium measured twenty-seven inches in horizontal circumference, and was completely ossified; there were many Wormian bones. The brain nearly filled the cranial cavity; the third and lateral ventricles were greatly dilated, the commissures enlarged. In the posterior fossa, indenting the bone on the right side, was lodged a thin-walled membranous sac, with clear contents, measuring one inch across. It came close to the foramen magnum, and was attached to the dura mater. The points of interest in the case were the unusual longevity attained by the woman, the size of the cranium, its complete ossification, the patency of the aqueduct of Sylvius, the existence of a cyst beneath the cerebellum, and the fair amount of intelligence that the subject exhibited. Dr. Brailey referred to the well-known case of Cardinal, whose skull, thirty-three inches in circumference, is in Guy's Hospital museum, and to the specimen presented by Liston to the College of Surgeons, from a subject twenty-five years of age, the skull in that case being thirty-six inches in circumference with great development of Wormian bones. —Professor HUMPHRY, who had seen the specimen dissected, offered an explanation of the occurrence of the sac beneath the tentorium—the specimen in all other points resembling other specimens of hydrocephalus of the adult—the cranium being dilated everywhere except its basal part. The dilatation of the membranes of the brain leads to an elevation of the falx, which draws up the tentorium so that it may become quite vertical. This vertical position of the tentorium is to be seen in a specimen in the Cambridge Museum, so that the posterior cerebral lobes considerably overlap the cerebellum. The subtentorial space devoted to the cerebellum is thereby increased; and Professor Humphry had noticed that this was compensated for in the specimen above referred to by the development of connective tissue between the dura mater and arachnoid. In the present case the whole tentorium was raised, the lateral sinuses and torcular Herophili taking a higher position than normal; and he presumed the sac containing fluid was developed to fill up the space unoccupied by the cerebellum. It was a sort of lymph sac thus mechanically produced. —Dr. BACON, who had the patient under his care during her life, remarked that she had a fair amount of memory, could repeat hymns taught her in childhood, and could converse intelligibly. She had a very irritable temper, and great want of self-control. He remarked upon the diminished size of the rest of the skeleton, and upon the unusual age attained by the patient. Most of the cases recorded died before thirty years of age. There is one case recorded in the *Journal of Mental Science* for 1879, where the subject was thirty-eight years old, and whose skull measured twenty-four inches in circumference.—The PRESIDENT had some years ago published three cases in the *Journal of Mental Science*, one of which is also described in his work on "Rest and Pain" by Mr. Hilton, who ascribed the condition to closure of the fourth ventricle. Dr. Wilks himself thought that an excessive amount of fluid in the brain was often due to inanition, and occurred in rickety children with large heads and low mental capacity. The fluid was often reabsorbed; as, for instance, in a young man, now of good intelligence and normally sized head, who when a child had the characteristics of hydrocephalus and curved legs, so that he was thought to be rickety. The large head with overhanging forehead so common in the criminal classes could not be attributed to a greater increase of natural brain, but was probably due to fluid.—Professor HUMPHRY, in reference to a remark by Dr. Wilks, said that he certainly believed many people with large brains did not use them to their full capacity; but his observation was that our far-off ancestors had large brains which they did not seem to have used so much as they ought. He believed the cause of hydrocephalus to be due to a want of the normal balance between secretion and absorption of the fluid, the power by which the fluid is poured into the ventricles exceeding the resisting power of the skull, just as in a hydrocele the fluid is secreted in excess in spite of the resistance offered by the tunica vaginalis. But what it was that determined the balance being normally so accurately maintained was unknown.—Dr. LONGHURST asked whether the cyst interfered with the function of the cerebellum. — Professor HUMPHRY explained that it appeared to have been developed simply to fill space which would otherwise be unoccupied.

Dr. HALE WHITE showed a specimen of Dermoid Tumour of the Soft Palate, from a child three years of age who had had some difficulty in swallowing. The uvula was much hypertrophied, and lay in front of the tumour, which apparently sprang from the upper surface of the soft palate. The tumour was two inches in height, and had a wide base; it was freely movable, and was removed by Mr. Morrant Baker. It was found to be soft in consistency, except on one surface, where a plate of cartilage existed. Microscopically it reproduced all the cutaneous structures—epidermis, papillæ, corium, and fat cells, but no elastic fibres. There were also many hairs lodged in follicles, into each of which a single sebaceous gland opened. The plate of cartilage was invested by a dense layer of fibrous tissue; its matrix was very scanty and fibrillated, the outer layers of the cartilage being composed of nucleated stratified cells. Dr. White referred to a similar growth from the basilar process of the occipital bone, recorded by Dr. Abraham in the *Journal of Anatomy*, vol. xv., and to one on the palate of a new-born child described by Dr. Kidd in 1856. As to the origin of the tumour in the present case it might have grown in connexion with the Eustachian tube; but its epiblastic nature was sufficiently accounted for by its occurrence in front of the junction of the hypoblast and epiblast. It might be an instance of "reversion," for in the rabbit there occur in this region four tufts of hair—two above and two below.—Mr. RUSHTON PARKER had lately seen a similar dermoid growth removed by Mr. Bickersteth from the pharynx of a child, depending behind the soft palate.

Mr. MALCOLM MORRIS exhibited a case of Extensive Lupus. The patient was a woman sixty-four years old, who had enjoyed good health until 1858, when she became very weak, and remained so until 1860, when she had an attack of general dropsy, which gradually disappeared from all parts except the legs. About the end of that year a brown patch appeared on the front of the right leg, ultimately ulcerating. Other ulcers appeared—one on the calf being large and slow in healing. The skin in their vicinity became red and raised; and similar patches appeared elsewhere below the knee. During the next five or six years more patches appeared on other parts of the body, the left leg, and arms. In 1871 a small spot of like character appeared on the vertex of the scalp, slowly spreading towards the face, passing to the nose and cheeks, and destroying the sight of the right eye. For the last few years the disease has spread but little. At present there are two ulcers with sharply-defined healing margins on the right leg, the larger being on the side of the ankle. Cicatricial tissue covers the front of the ankle, the side and back of the leg. The foot, including the sole, is dry and scaly; and a similar hypertrophied condition of the skin occurs on the leg and thigh, terminating in an abrupt line (in parts slightly raised and red), about three inches from the hip-joint. Within the last few months three patches, red, tuberculated, and scaly, have appeared on the left leg; and others occur on each arm, on the head and face; in front of a line extending from one ear to the other the skin is replaced by scar-tissue, all the hair-follicles being destroyed except on a small area to the right of the middle line. The surface is smooth, shiny, and slightly scaly. There is some contraction, but the skin is not adherent to the bone. The disease extends over both sides of the face and neck—attacking the forehead, nose, and cheeks, and ending in an abrupt raised margin on either side of the chin. The left lower eyelid is drawn down and everted. Mr. Morris suggested that the disease of the head and face was lupus erythematosus, which rarely commenced so late as fifty-four. Mr. Tay reports a case where the disease began at fifty-one. The spreading ulceration on the legs indicated a different condition. Besides, lupus erythematosus invariably commences on the face, and the leg was

affected many years before. Was this primary ulceration also lupus? The slow course of the attack and its superficial character were against the hypothesis of syphilis, of which there was no history.—Mr. HUTCHINSON said the case was one of a rare form of lupus, and mainly a superficial form; but he did not think it was erythematous lupus, its superficial character alone differentiating it from ordinary lupus, its tubercular character (e.g., on the arm), and the slow serpiginous ulcers on the legs being sufficiently typical. There was another rare form of lupus which, from its superficial character and slight discharge, much simulated eczema.—Dr. THIN some years ago saw a case of erythematous lupus on the forearm, spreading towards the shoulder, and limited by an abrupt line. He regarded Mr. Morris's case as one of lupus erythematosus, which he would distinguish from erythematous lupus. In lupus proper there was a tubercular formation due to aggregations of cells, which were not met with in lupus erythematosus, a specifically distinct affection both clinically and anatomically. The change in lupus erythematosus creeps along the papillary layer, but leaves unaltered the pars reticularis of the corium.—Mr. HENRY MORRIS said that there was now under his care in one of the cancer wards of the Middlesex Hospital a woman who had suffered from lupus for six or seven years. The disease had destroyed the lip, nose, both eyes and eyelids, and one ear, and had resulted in extensive cicatrisation. The whole of the area occupied by the ear was now a white cicatrix. Ulceration occurred at different times, and then healing took place. The disease was limited to the head and face, and was somewhat deeper than in the case exhibited, but it resembled that in its limitation on the scalp to its anterior part.

Mr. BUTLIN showed a specimen of Squamous Epithelioma of the Upper Jaw, removed from a man sixty-two years old, admitted into St. Bartholomew's Hospital in November, 1880, for carbuncles on the back. In December he complained of a sinus in the upper jaw, which had been discharging for some time before. On Dec. 29th Mr. Willett explored this sinus, which opened into the alveolus of the second right molar tooth, and was thought to be due to carious bone. Exploration of the antrum through this sinus showed that cavity to be partly filled with pus and blood, and to be lined by soft granulation-like material. There was no swelling; but the condition of the antrum was thought to be suggestive of malignant disease. At the beginning of February Mr. Butlin scraped out some of the contents of the antrum, and found in the scrapings altered epithelial cells and cell-nests. Accordingly, on Feb. 8th, he removed the whole of the maxilla, and found that the disease not only filled the antrum, but invaded the orbit and spheno-maxillary fissure, and had made its way beneath the temporal muscle. Yet the only external indication was a slight puffy swelling, which had appeared beneath the orbit in January. The growth was a pure squamous epithelioma, and was remarkable for its insidious character, and widely-destructive course within a comparatively short space of time. It belonged to the class of maxillary new growth called by Reclus "epitheliome terebrante" (*Progrès Médical*, 1876), and described by that writer as starting from the alveolar process. In each of Reclus's cases the disease was first thought to be caries, and ran a rapid cause. The disease probably starts from the alveolus of a tooth which has become carious, or from which the tooth has fallen out, and thence spreads into the jaw, and does not start in the antrum, which is lined by cylindrical epithelium. It was not, therefore, necessary to trace its origin back, as Reclus does, to an alveolar cyst, or to the remnant of the epithelial masses of the primitive tooth sac. There was no affection of the glands or other internal organs in this case. The only other instance in English literature is one described by Mr. Lawson at the Clinical Society in 1873, as a well marked squamous epithelioma, which Mr. Hulke suggested as beginning in the alveolar process.—Mr. RUSHTON PARKER did not think this form of disease very rare.

The following card specimens were shown:—Odontoma of Left Second Lower Molar, by Mr. Rushton Parker; Old Outward Dislocation of the Patella, by Mr. Charles J. Symonds; Sequestrum of Clavicle, Osteo-Sarcoma of Lower End of Femur, and Cancer of Mamma following Eczema of Nipple, by Dr. Macnaughton Jones (through Mr. Hutchinson); Epithelioma of Tongue; Gangrene of Lung after Excision of Tongue, by Mr. Royes Bell.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Pseudo-hypertrophic Paralysis.—The Digestion of Fats.—Disseminated Syphilitic Meningitis.

At the meeting on March 28th the chair was taken by the President, Dr. BROADBENT, who exhibited a man, aged fifty-one, who had been eleven years a soldier and subsequently followed the occupation of a gardener. At the present time he was a patient in St. Mary's Hospital. For two years he had a rolling gait, and gradually became unable to raise himself from the recumbent or sitting posture. The man presented all the characteristics of pseudo-hypertrophic paralysis. As he walked he swayed from side to side and was unsteady on his feet; in short, he exhibited just the condition of the children who were shown at the last meeting of the Society. The tensor vaginæ femoris was large and in an energetic condition; there was extreme lordosis. The calf muscles did not respond to continuous or interrupted currents. Dr. Broadbent asked what was the nature of this paralysis. It was not progressive muscular atrophy, nor was it an instance of the adult form of infantile paralysis; the lipomatous development so often associated with this kind of paralysis he did not regard as an essential feature. He would venture to remind the Society that at one time infantile paralysis was considered to be confined to children, but such is not now found to be the case.—Mr. ADAMS remarked that the case certainly simulated Duchenne's paralysis thoroughly both in attitude and movement, but it was against his experience to find the disease commencing so late in life. It is essentially a disease of children, a congenital affection.—Dr. GILBART SMITH said that in 1862 Trousseau had called locomotor ataxy Duchenne's disease, but now authorities seemed undecided as to what the term "Duchenne's disease" really referred.—Dr. MACKENZIE had a patient, an adult match-seller, with similar symptoms. He also regarded the fatty development as an accidental accompaniment, and as more apt to exist in Duchenne's paralysis of children than of adult age.

Dr. J. MILNER FOTHERGILL made some remarks upon the Digestion of Fats, and of the value of conveying them into the stomach in the form of an emulsion; he considered that the best emulsifying agent was bile, and that the small quantity of bile required for this purpose would not be irritating to the stomach.—Mr. DORAN asked if the distaste for fats in phthisical patients was not often due to the inability that existed to digest such foods.—Dr. THOROWGOOD hoped the result of the administration of these emulsions would be made known. He regarded with favour the combination of malt extract with cod-liver oil, which he has employed for some time.—Mr. OWEN had used an emulsion of oil and solution of potassium. Only a small quantity of the alkali was required, but he was not prepared to say that its administration was followed by any markedly satisfactory results.—Dr. FOTHERGILL, in reply, said that he had brought forward the whole question in a purely tentative manner, and hoped that as time went on some definite result might be obtained.

Dr. MACKENZIE read notes of a Case of Disseminated Syphilitic Meningitis, illustrating the value of Mercurial Treatment. The patient, after the customary prodromata, came under treatment for great tremor of the hands and legs, occurring on voluntary movement, pain in all the limbs, formication in the hands and feet, stiffness of hands and fingers, and pain in left side of head. She had a characteristic syphilitic tertiary eruption on the forehead and forearm. Iodide of potassium in ten, and, later on, in twenty grain doses, failed, even in combination with the internal administration of the perchloride of mercury, to ameliorate the nervous symptoms, though it sufficed to cure the syphilide. Mercurial inunction and perchloride of mercury, internally, were then employed with rapid relief to the symptoms; salivation was produced, and the mercury had to be suspended for a short time, but was resumed afterwards, mercurial inunction alone being employed cautiously and intermittingly, on account of the great susceptibility of the patient to its influence. All the symptoms gradually cleared off, leaving the woman weak. Fifteen months later the improvement had not only been maintained, but was greater. The case was brought forward to illustrate the value of mercury in such instances, mercury often acting more quickly and certainly than iodide of potassium; and, as

in this case, when the iodide had failed to produce any favourable influence, inunction was the form recommended in syphilitic nervous affections, as by this means the largest quantity of mercury could be introduced into the system with the least disturbance. The first thing was to use it boldly, the next to continue its use sufficiently long.—Dr. DOWSE thought it strange there was no mention of retinal changes in Dr. Mackenzie's case; it was his experience that generally more faith was placed, and properly so, in the use of preparations of mercury than in those of potassium.—Dr. HERON asked why the author had chosen the perchloride of mercury before all the other preparations of the metal. Some practitioners went so far as to say that the perchloride was therapeutically useless; was there any family history of neurosis?—The PRESIDENT noted one peculiar and interesting character of the spinal affection—syphilitic myelitis, which here resembled very closely diffused sclerosis. It was the first time he had heard a simulation of these two important diseases. He would have begun with the iodide of potassium, but if the cure was delayed he would have prescribed mercury.—Dr. MACKENZIE replied that in the later stages of the disease mercury is required, then solution of the perchloride is of the greatest therapeutic value.

The meeting then adjourned.

EPIDEMIOLOGICAL SOCIETY.

AT a meeting of this Society held at University College on March 2nd, Sir Joseph Fayrer, K.C.S.I., M.D., in the chair, Surgeon-General Dr. John Murray read a paper on the "Influence of Fairs, Famines, Floods, and Seasons on the Development and Diffusion of Cholera in India," which was accompanied by several very elaborate statistical tables. Tables Nos. 1 and 2 illustrated the effect of fairs by showing the mortality caused by the epidemics which originated at Hurdwar in 1867 and 1879. No. 3 showed the mortality which follows the great fair at Allahabad in the eastern districts of the north-western provinces, Oudh and Behar. No. 4 related to the mortality in the delta of the Ganges after the cyclone wave of 1876. No. 5 showed the mortality from cholera accompanying the famines in Madras in 1866 and in 1875-6-7. These tables were so arranged as to contrast the mortality in the epidemic years with that in ordinary years, and also to show that in some years the disease was almost non-existent. An abnormal increase of the disease must be induced by some special cause; and those causes now under consideration range over a wide area, and involve a population of more than thirty millions under each head, and must therefore be of the utmost importance in the history of the disease. The statistical returns of the civil population show the course of the disease more clearly than the records of military hospitals, though the latter have been kept from the beginning of the present century. The period is longer, but the number under observation is comparatively small, and the disease is under the restraint of strict medical and sanitary treatment. The military also are exempt from the influence of floods and famines, and almost so from that of fairs, but the influence of season is common to all. In considering the subject of fairs the epidemics following the Koomke Mela at Hurdwar were minutely traced, accurate returns having been obtained from all the civil surgeons of the appearance and progress of the disease in their various districts in 1867, and in all cases the dates corresponded with the arrival of the pilgrims at the ordinary rate of travelling. In 1879 the dates coincided in all instances except in Scinde, where its arrival was accelerated by about two months, which may be attributed to the introduction of railway travelling, more than a hundred cases of the disease having been removed from the trains in a dead or dying condition. The great fair which is held in February at Allahabad is followed by an analogous diffusion of cholera. The fair is held six weeks earlier than that of Hurdwar, and the epidemic appears six weeks sooner. These reiterated facts prove the danger arising from these fairs, but their suppression cannot be resorted to by Government on account of the religious feelings of the natives. To control them and establish strict sanitary supervision is all that can be recommended, though less efficacious. Dr. Cuningham denies the transmission of the disease by the pilgrims, but rather considers it existed in some aerial form in the villages, and attacked the pilgrims who were peculiarly susceptible of its inroads; so that, instead of th pilgrims importing the disease which affected the inhabitants, the village infected the pilgrims. This opinion rests entirely on the theory that such aerial poison exists, of which there is no proof or probability. The next division of the subject referred to the severe epidemic which commenced two days after a cyclone wave overwhelmed the eastern part of the delta of the Ganges on October 31st, 1876. It proved fatal in the following four months, in the three coast districts, to 75,459 persons. The disease spread to the surrounding districts, and the mortality during the year amounted to 159,733. In Table No. 4 the year is counted from July 1st to June 30th, to show the course of the epidemic, which culminated in January, and rapidly subsided after February. The course of the disease in this epidemic appears to be an exaggeration of the usual course of cholera in the delta, which differs essentially from that in the other provinces of Bengal, Orissa, Behar, and Assam, and also from its course in the Upper Provinces, Scinde, Punjaub, Central Provinces, and Bombay, where the cold season is a period of quiescence, while it is at its height in the cold season in the delta of the Ganges. There was a partial cyclone wave on the southern coast of Chittagong in 1879, followed by a similar outbreak of cholera two days after the subsidence of the water. The influence of famine on cholera was shown in Madras, where there was a severe famine in 1866, when the mortality from cholera amounted to 197,977. A more prolonged famine occurred in 1875-6-7, when the mortality from cholera rose to 617,869. The course of the disease in both famines was identical, the mortality being greatest when the price of food was highest. It was little influenced by season, and was probably aggravated by the collection of crowds of starving people at the famine kitchens and its spread on their return to their homes. The influence of season is shown in the returns from the military and civil hospitals, which are epitomised in Tables 6, 7, and 8. They extend over a longer period—viz., from twenty-six to seventy-four years, but include a much smaller population. The season of the prevalence of the disease, as it appeared from the tables, differs essentially from that shown by the tables relative to the civil population in the epidemic years. In the military hospitals of the Upper Provinces and the Punjaub the greatest mortality is at the commencement of or during the rainy season—i.e., from June to September, whereas the greatest mortality amongst the civil population commences in April. By removing the epidemic years from the civil tables, the returns for the other years show a seasonal increase in the mortality coinciding with that in the military hospitals, but this is obscured by the excessive mortality of the epidemic years.

In the discussion which followed, the President, Dr. Norman Chevers, Dr. White, Dr. Duka, Dr. Dickson, Mr. Netten Radcliffe, Mr. Lawson, and Dr. Gordon took part.

A letter from Mr. J. Lawrence-Hamilton was read on the subject of artificial production of vaccine lymph.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting on Wednesday, March 2nd, 1881, Dr. Matthews Duncan, President, in the chair,—

Dr. GODSON showed, for Dr. J. Dewar, a specimen of Interstitial Fibroid. The patient was a widow aged forty-three, sterile. Three years ago Dr. Dewar attended her for retroflexion. She wore a Hodge's pessary with advantage for some time; then it began to give pain, and had to be removed. About a year after she had an acute attack of pelvic peritonitis, which left the uterus fixed. She died rather suddenly from a second attack of peritonitis. The specimen showed a small fibroid in the anterior wall of the body of the uterus. The fundus was retroflexed, pointing downwards very markedly.

The PRESIDENT then delivered his inaugural address, which has already appeared in our columns.

Dr. BARNES read a paper on so-called "Missed Labour, with a case in illustration." The author commenced by stating that the term "missed labour" proposed by Dr. Oldham was not justified by the facts of that gentleman's case, which proved on autopsy to have been one

of extra-uterine gestation. Discussing other cases of presumed missed labour, and accepting the arguments of Stoltz and Müller, the author affirmed that no authentic example of missed labour—this being taken to mean the prolonged retention in utero of a fœtus living at term—is yet known. He cited examples of the retention of the ovum which had perished in utero at a previable age for some time, and notably until the arrival of the natural term of gestation. He related a case which came under his own care. A lady aged thirty-nine had borne three still-born children, the last of them five years ago, before consulting Dr. Veitch at Penang in December, 1872. Pregnancy dated from early in November preceding. The usual signs of pregnancy were manifested; she verified quickening, and up to the seventh month she felt movements of the child. About the eighth month, after a slight accident, a flow of blood came. Three weeks later another bleeding occurred, but no labour pains. Eleven months after the presumed date of conception she came to England. There was an impression that she might be suffering from fibroids of the uterus. She came under the author's care in December, 1873. Under chloroform, the cervix uteri having been dilated by laminaria tents, he felt what he took to be the interior surface of the uterus; the sound passed six inches. In January, 1874, some coloured discharges went on. Pieces of bone, which turned out to be bits of the spinal column, passed by the vagina. After dilatation by tents more bones were removed by fingers and forceps. In February this manœuvre was repeated, and by craniotomy-forceps the remaining parts of a fœtus, which appeared to have reached the eighth or ninth month of gestation, were extracted. Her health then improved, the discharges became less offensive, and the uterus gradually shrank as in ordinary involution, but more slowly, until it reached the common conditions of the non-pregnant state, and the patient perfectly recovered. The author submitted that this was a clear instance of the retention of a fœtus dying in utero at a viable stage for some months after the normal term of gestation had been reached, and that in this sense the term missed labour might apply. He cited the cases of Dr. M'Clintock and Dr. Hall Davis as corroborative.—Mr. SPENCER WELLS, who had seen the patient, asked if the case might not be explained on the assumption that the pregnancy was what had been called by some interstitial or mural, in which the ovum is arrested where the Fallopian tube passes through the uterine wall. He remembered that some attention had been given to this view at the patient's bedside, and thought that the subsequent history was quite consistent with this view. It was strengthened by a case he saw last year. A lady who believed she was in the fifth month of pregnancy was reduced to a state of extreme danger by constant pains and vomiting. Eminent men had said she could not be pregnant, because the cervical canal admitted the finger, and the sound could be moved freely to a depth of nearly five inches. Mural pregnancy was diagnosed, ergotine was injected into the substance of the cervix uteri; severe pains followed, and the expulsion of the fœtus, with perfect recovery.—Dr. ROPER thought that a reasonable explanation of these cases of so-called missed labour might be given from a point of view hitherto unnoted. He believed that most of them were originally uterine gestations, which during their course became partially, or wholly, extra-uterine in consequence of a degree of rupture of the uterus from external injury, or spontaneous giving way through degeneration of the uterine structure. The fœtus did not escape entirely, but to such a degree that ultimately a cyst was formed outside the uterus, the fœtus being partly within and partly without. The first symptoms were those of pain, coincident with some accident, and the pains of labour were always equivocal. The fœtus at this time died, and the pains subsided; then followed the history common to all—fetid discharge, putrilage, and bones. When an autopsy had been made an aperture had been found, connecting the cavities of the uterus and the cyst. The rigidity of the cervix in these cases was of interest, as illustrating uterine polarity. The fundus being injured fundal polarity was arrested, while cervical polarity remained in full force.—Dr. GERVIS, in corroboration of Mr. Spencer Wells's suggestion, mentioned a case of extra-uterine pregnancy, in which very unexpectedly, about the fifth month, delivery occurred per vias naturales. The practitioner in attendance, on introducing his hand, found a distinct cavity towards the left angle of the fundus, in which evidently the fœtus had lodged. He also referred to cases in which, when delivery was due, a few ineffective pains occurred, but delivery did not occur till three or four weeks later. He mentioned a typical case in which this occurred in successive pregnancies, with the result that instrumental aid was necessary, and the child was each time born dead. At her fifth confinement the effort of nature was supplemented at the ninth month, and a living healthy child born. In the sixth pregnancy there was again protracted gestation, and a stillborn child.

HARVEIAN SOCIETY OF LONDON.

AT the meeting of this Society held on March 17th, the President, Mr. Henry Power, in the chair, Mr. Bryant read a paper on Gastrostomy, which we publish *in extenso* elsewhere.

The PRESIDENT thought that in spasmodic stricture of the œsophagus this operation of gastrostomy would be useful, and related a case of a gentleman, aged fifty-six, spare and wasted, he took to Sir W. Fergusson many years ago. A large bougie was forced through the stricture into the patient's stomach, but he got worse and was nearly starved to death. Subsequently Sir J. Paget saw the case, but did not operate as he suspected cancer. Death soon afterwards took place. At the post-mortem no disease of any kind was discovered, and there was no stricture after death; in fact, it was a case of spasmodic stricture, which ended in death. Mr. Bryant's mode of operation would, he thought, have saved the patient.—Mr. W. RAYNER related a case of a gentleman who swallowed molten lead, and who recovered from stricture in the œsophagus after dilatation for two years by means of gradually increasing the size of the bougies.—Dr. CLEVELAND asked whether purgatives were given in this case.—Mr. BRYANT, in reply, asked Mr. Power whether chloroform had been given in his case.—The PRESIDENT thought not.—Mr. BRYANT related another case of cancer of the œsophagus in which he performed this operation. Two days after the operation the man drank off a pint of milk and swallowed some bread. Notwithstanding this he died seven days afterwards. The œsophagus was found to be completely divided in half by ulceration. The post-mortem, carefully made, failed to show how this result occurred. He thought gastrostomy was an operation justified in many cases, and insisted on the great importance of making a *small* opening.

Dr. GOWERS then read a paper "On the Nature of the so-called Tendon-reflex Contractions." He first briefly described and demonstrated these phenomena, and urged the use of the term "knee-jerk" instead of "patella-tendon reflex," an expression which was probably inaccurate. He pointed out a method by which this phenomenon, when it is in excess, may be conveniently demonstrated on a patient in bed—viz., by depressing the patella with the finger, and then tapping the depressing finger downwards; the quadriceps instantly contracts. The evidence in support of the commonly received view that the contractions are individually reflex from the tendons was then considered, and it was admitted that it proves that some reflex influence is concerned in their production. But it was pointed out how much there is in the phenomena which cannot be accounted for on the simple "tendon-reflex" theory. The phenomena of the clonus in thigh and calf were especially difficult to reconcile with this theory. The significance of the fact pointed out by Westphal that passive muscular tension is essential for the occurrence of the contractions was then insisted on, and it was demonstrated that a tap on the tendo Achillis is ineffective unless it increases its tension, and so affects the muscle. Moreover, in what the author had called the "front tap contraction," no stimulation of the tendon was possible. The most conclusive evidence was that supplied by Tschirjew, who divided all the nerves to the patella tendon, and still found that the tap upon it made the muscle contract. The evidence thus seemed conclusive that these contractions (including the knee-jerk) are not excited by stimulation of the nerves of the tendons, but that the stimulus originates in the muscle. Is not, it was then asked, the contraction local, as Westphal has always maintained? The evidence from the time-measurements of Burckhardt, Tschirjew, Brissaud, Waller, and the author were then considered, and regarded as strongly opposed to the reflex nature of the individual contractions, all known facts negativing the assumption that a reflex contraction

could occur in so short a time as the 1-30th or 1-40th of a second. The discrepancy between the evidence on the one hand that the integrity of the reflex arc to, through, and from the cord is essential for the occurrence of the phenomena; on the other hand, that the individual contractions are of local origin, can, it was urged, only be reconciled by the theory that passive tension develops in a muscle by a reflex action, an extreme irritability to local stimulation, and perhaps also a slight tonic contraction. This view, originally put forward by the author as an explanation of the "foot phenomenon," is, he now believed, equally applicable to the knee-jerk. The afferent impulse from muscles when put into passive tension affects the consciousness, and may produce a true reflex action, but the interval before this reflex action the author had found to be three times as great as that before the local contraction, and equal to the interval before a skin-reflex (Burckhardt). It was urged, therefore, that it is most important to discard altogether the term "tendon-reflex." The phenomena are dependent on and indicative of a "muscle-reflex" irritability which has nothing to do with tendons. It was important, however, to employ a general designation which involved no theory. The common feature of these phenomena is that insisted on by Westphal, that passive tension is essential for their production, and it was suggested that they should be called *myotatic contractions* (τατικος, extended). The similar contractions occurring in the arm were then alluded to, and the paper concluded with an outline of the conditions in which these contractions become excessive or deficient.

The President, Dr. Dowse, and Dr. Cleveland spoke, and Dr. Gowers replied.

Reviews and Notices of Books.

Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques. Tom. XXIX. POL—PRO. With 93 Figures. Pp. 796. London: J. B. Baillière, Tindall, and Cox. 1880.

AFTER a delay which, though not long, is yet unusual with the successive volumes of this valuable and well-arranged work, the twenty-ninth volume has made its appearance. The chief articles are—Polypi, by A. Heurtaux; Pulse, by M. Duval; Lungs (Poumons), by Duval, Merlin, Balzer, Gauchet, Letulle, Dieulafoy, and Homolle; Professions and Occupations, and the diseases incident to them, by Proust; and Prostate, by Campenon. The minor articles are — Polygala, by Héraud and Barrallier; Polyuria, by Cuffer; Popliteal Region, by Schwartz; Porta (Vena), by Straus; Potassa, by Prunier; Pourriture d'Hôpital (Hospital Gangrene), by Rochard; Protoxide of Nitrogen, by Blanchard; Prurigo and Pruritus, by Hardy; and Pomades, Potions, and Powders, by Villejean. The *pièce de résistance* is the article Lungs (Poumons), which has been committed by the editor to no less than seven hands. M. Duval takes the Structure, the Physiology having been already discussed under the head of Respiration; M. Merlin takes Wounds; M. Gauchet, Congestion, Hyperæmia, and Œdema; M. Balzer, Embolism, Pneumonoconiosis, and Hæmorrhage; M. Homolle, Abscess and Emphysema; M. Straus, Gangrene; M. Dieulafoy, Cancer; and M. Letulle, Neoplasms, and Vegetable and Animal Parasites; and even then Pneumonia and Pulmonary Tuberculosis are considered under special titles.

The black colour of the adult lung is now believed to be attributable to carbon absorbed from without; but M. Duval adduces one or two facts in proof of this with which we were not acquainted. Chevreul, he states, established its carbonaceous nature by demonstrating its combustibility, whilst Traube in a charcoal burner recognised particles of vegetable carbon which, when examined microscopically, exhibited the forms of the cells and canaliculi of Pinus Sylvestris. Robin and Pouchet, again, have shown that true melanic granules are rendered yellow and coherent when exposed for a short time to the action of boiling liquor potassæ. His account of the anatomy of the organ agrees essentially with that which was given long ago in this country by Dr. Waters, the description of the epithelium being given in accordance with his own observations. In the section on traumatic pneumonia it is stated that Klebs and Socin have both shown that in cases of wounds of the lung the inflammation is limited to the part injured, and that in the case of bullet wounds in particular the pulmonary tissue surrounding the traject of the ball was simply hepatised to the extent of two or three millimetres. Balzer gives some interesting details in regard to fatty embolism of the lung, a condition that appears to have been first recognised by Zenker in 1866, who observed it in a man who had been crushed between two waggons, but did not fully appreciate the importance of his discovery. In the same year Wagner recognised the presence of fat in the capillaries of the lungs, Busch showed the constant connexion that exists between fatty embolisms and fractures or other lesions of the osseous tissue, and attributed it to the disintegration of the fat cells of the marrow of the bones, and he corroborated Wagner's statement that fat particles might become the foci of chronic suppuration. Microscopic examination of the lungs rarely enables the diagnosis of fatty embolism to be made, but sections stained with osmic acid readily enable it to be accomplished. The affection is characterised by dyspnœa, increased rapidity of pulse, and great debility. Mucous râles are heard, but percussion furnishes no sign, and hæmoptysis is rare. The only remedy for the disease is the instant amputation of the injured limb above the level of the fracture and at some distance from it.

The section on Gangrene of the Lung by Straus is very interesting. The diagnosis of the affection can scarcely be said to date back further than Laennec, for in the scattered and imperfect notices that appear in previous writers it is difficult to recognise the special characters of the disease or to distinguish the examples they relate from fetid expectoration in cases of dilated bronchi, pleural affections, and the like. Laennec's chapter on the subject receives high commendation, and his division of gangrene of the lung into circumscribed and non-circumscribed is followed. The right lung is more frequently affected than the left in the proportion of 3 to 2, and it is more frequent in males as compared with females in the proportion of 11 to 4. The disease rarely becomes arrested, and recovery may take place, the necrosed tissue being discharged by a bronchus. Its cause is almost always exposure to long-continued cold when the bodily powers are weakened. The symptoms are then given in detail. The treatment of the disease has of late years greatly improved; instead of the leeches and derivative measures employed by Laennec in accordance with the fashion of his day, inhalation of turpentine evaporated with water was adopted by Skoda, and more recently the disinfectant plan has been very thoroughly carried out with the aid of the pulveriser with success.

The article on the Prostate is remarkably complete. The structure of the gland is given, with sketches of the anatomical disposition of the parts at the ages of twenty-five and sixty-five respectively. M. Campenon doubts the influence of inflammation and other diseases of the bladder in producing prostatitis, and states that he has often seen severe and long-continued attacks of cystitis run through their whole course without the prostate becoming involved. On the other hand, the influence of urethritis and of excess in sexual intercourse is indubitable, especially if the patient has any proclivity to rheumatic, arthritic, or scrofulous disease. In describing the characters of both acute and chronic prostatitis, as well as those of abscess of the gland, the views of Sir Henry Thompson are very generally quoted with approval, and M. Campenon everywhere shows himself to be familiar with English surgery. Some interesting statistics are given in regard to abscess of the prostate. It

appears that, excluding his cases of accidental death, about one in seven dies, and about one in seven recovers with a fistula. The causes of death, in the order of frequency, are purulent infection, septicæmia, exhaustion owing to prolonged suppuration, peritonitis by perforation and by contiguity, the last two being occasional only. The treatment both of abscess and of its effects is given in detail, but presents no novel feature. The thoroughly well worked-up sections on cancer, tubercle, calculus, and hypertrophy of the prostate render this article a complete monograph on this subject.

Anatomy of the Arteries of the Human Body, Descriptive and Surgical, with the Descriptive Anatomy of the Heart. By JOHN HATCH POWER, F.R.C.S.I. Third Edition, by WILLIAM THOMSON, A.B., F.R.C.S., Surgeon to the Richmond Surgical Hospital, &c. With Illustrations by B. WILLS RICHARDSON. London: Longmans and Co. 1881.

THIS is a handy volume, containing, in addition to the descriptive anatomy of the heart and arteries, directions for the operations of ligaturing the arteries, and an account of the anastomotic circulation by which the supply of blood to the part below is carried on. A short historical account of some of the operations with lists of the ligations of the more important arteries and accounts of cases of very special interest are given. Both the anatomical and surgical information is stated clearly and accurately, and the book will be useful to the practical surgeon. The illustrations are many of them familiar, but good. If to the account of the pericardium a description of the operation of paracentesis pericardii, with a discussion of the best site for the needle puncture, had been added, and the best places for, and plans of, applying compression to the various arteries had been appended, the work would have been made much more complete, and brought more thoroughly up to date. We would suggest these improvements in a subsequent edition.

L'Encéphale: Journal des Maladies Mentales et Nerveuses. Sous la Direction de MM. B. BALL et J. LUYS. No. 1. Paris: Masson.

THIS new addition to periodical neurological literature makes its appearance under able editorship. Its title is borrowed from its English contemporary, and its characteristics are announced as impartiality, a practical spirit, and scientific scepticism—"the negative virtue which teaches us never to accept a fact without controlling it, an idea without discussing it, an hypothesis without demanding proofs." Of the original articles the first two are by Professor Ball on "Functional Cerebral Ischæmia," in which he propounds the theory of vascular spasm as the best explanation of certain transient paralytic symptoms, and a study of "Intellectual Impulsions." Dr. Luys follows with a contribution to the pathological anatomy and histology of idiocy. A long and interesting sketch of unilateral hallucinations is contributed by Dr. Regis. Dr. Chambard describes an extremely rare form of cerebral tumour—primitive epithelial carcinoma of the pia mater. Dr. Boye gives an account of the results obtained in the practice of M. Ball by the not altogether new method of combining familiar drugs in the treatment of epilepsy. A few abstracts, a series of clinical cases, analyses of the proceedings of the scientific societies, and some reviews conclude the number.

Pheasants; their Natural History and Practical Management. By W. B. TEGETMEIER, F.Z.S. Second Edition, greatly enlarged. London: Horace Cox, *The Field* Office.

WE are glad to notice the issue of a second edition of this beautiful work, which should be on the book-shelves of every sportsman, and is not without interest for students of natural history.

New Inventions.

A NEW SURGICAL POCKET CASE.

MESSRS. LAWLEY & SON, 18, Farringdon-street, have submitted to our notice a new pocket case containing, in a small and tolerably portable form, all the instruments required by the student, surgeon, or general practitioner, for the performance of most minor operations and a few of the larger operations. The case contains several knives, scalpel, bistouries, lancets, and a small saw with movable handles, a director and ear scoop, a caustic holder, thermometer, male and female catheter, hypodermic syringe and bottle, probes, spatula, scissors, dressing, artery, and polypus forceps, a grooved needle, and other instruments. Indeed there are too many articles rather than too few. The absence of a fine trocar and cannula may easily be corrected. The arrangement is ingenious and the total cost comparatively small.

ABDOMINAL BELT.

DR. FISHER'S abdominal belt may be worn for support during pregnancy or with a pad for umbilical hernia. The advantages claimed for it are that it is cut in parts so as to fit the figure, and that it contains neither elastic nor whalebone.

FLESH RUBBERS FOR THE BATH.

MESSRS. F. NEWBERY & SONS, of London, have submitted some specimens of Livermore's flesh-gloves and back rubbers for use in the bath. They are made in a peculiar way with india-rubber, and answer the purpose for which they are intended exceedingly well. One great advantage is that they take the soap and make a good lather.

INTERNATIONAL MEDICAL CONGRESS.

As the time of the meeting approaches the evidence of general interest in the Congress becomes increasingly apparent. In several of the sections the number of communications already promised is large enough to fill up the entire time likely to be at their disposal, and these by contributors whose high scientific character is sufficient guarantee for the merit of their intended papers. The choice of the Executive Committee of a representative of French medical science to give the fourth of the general addresses has fallen upon Dr. Maurice Raynaud, a distinguished physician and an accomplished orator, the author of "Le Médecine au Temps de Molière," as well as more strictly scientific works of high merit. In Paris a lively interest is taken in all that pertains to the Congress by a large number of the hospital physicians and surgeons, and a number of medical men from the provincial French towns and schools have expressed their intention to be present. The College of Surgeons have decided to give a conversazione in the Hunterian Museum on Friday, August 5th, and the preparations that are being made both in respect to public and private hospitality will not be unworthy of the occasion. The Society of Apothecaries of London have liberally granted the sum of £52 10*s.* to the funds of the Congress, and the College of Surgeons of Ireland the sum of £25; and it is hoped that all intending subscribers to the Congress will signify the amount they wish to give as soon as possible, as otherwise the Executive and Reception Committees are unable to finally decide upon the programme of entertainments, the cost of which for so large a number as that which is expected being necessarily large.

MR. WHITFIELD PERKINS, upon recently resigning the appointment of Assistant Medical Officer to the City of London Lunatic Asylum, Stone, near Dartford, Kent, was presented with many gratifying tokens of esteem by the officers and employés of the institution, including a pony carriage, a tea-pot, a coffee-pot, &c., subscribed for by the attendants and artisans.

THE LANCET.

LONDON: SATURDAY, APRIL 9, 1881.

WIDESPREAD astonishment and unfeigned regret have been occasioned by the announcement that Dr. QUAIN, an eminent physician of the orthodox school of scientific medicine, has been called in consultation at the bedside of the Earl of BEACONSFIELD, and consented to meet and act with Dr. KIDD, a reputed homœopath. The explanation offered is that Dr. KIDD had not been treating the noble lord on homœopathic principles, but "according to the regular practice of allopathy," whatever that may mean; and Dr. QUAIN, though he at first declined, having satisfied himself on this point, and taken the advice of "leading members" of the profession, was able to lay aside his scruples, and even to persuade himself that he "would not, under the circumstances, be justified in persisting in his refusal." The question which first suggests itself on receiving this account of the matter will probably be, *Who* are the "leading members" of the profession upon whose counsel Dr. QUAIN acted? It is not a little remarkable that no recent scandal has occurred, or mistake has been committed by any prominent member of the profession, without a similar expression of opinion from some unknown or unrecognised "authority," lending countenance and giving approval to the wrong done.

Who are the "leading members," the unseen censors of professional conduct and policy, whose advice in moments of difficulty proves so strangely at variance with the feeling and judgment of the great body of their brethren? It is time these mysterious counsellors should declare themselves; and, in the name of the profession, we now ask them to accept the responsibility, and if they can, to offer a satisfactory explanation of the counsel they have given, and the course they have approved. The next question will be, What sort of notion can the two physicians acting together in the case of the Earl of BEACONSFIELD have formed of the obligations which rest on every practitioner? They are both men of high reputation and acknowledged ability in their respective spheres of professional life. Nothing therefore which we may feel bound to advance in the frank discussion of this question can be held to have personal motive or incidence. The issue raised is not in any sense personal. The question is one of *principle*, not of men. Having made this clear, we repeat, What notion of professional responsibility can the practitioners thus unaccountably acting together seriously entertain?

There are three professions in the practice of which submission to the will or whim of an employer is impossible. The lawyer cannot construe an Act of Parliament in accordance with the views of his client, or, if he does, it is with the knowledge that his private interpretation will be set aside by any court of law which may be called upon to adjudicate. The divine may not so stultify the first principles of religion, as to adapt the doctrine he preaches to the desires or predilections of his congregation. It is equally impossible for the medical practitioner to submit his scientific judgment of the laws of health and disease, the principles and methods of treatment, to the whim or the prejudices of his patient. The physician who will undertake to treat the sick on either of two systems which are contradictory and mutually destructive is like the preacher who should offer his hearers a choice between the dogmas of Christianity and Mohammedanism, and agree to speak as the prophet of either indifferently.

If homœopathy be a *true* system of medicine, the regular system — which the homœopath stigmatises as "allopathy" — must be false. It is obvious, therefore, that a physician who is willing to practise either of these systems at the bidding of the sick person who seeks his services or on his own eclectic judgment, cannot be acting under a due sense of the importance of the work in which he is engaged. Consistent homœopathists will hold with us in this contention, and they will concede that it is only on the presumption of earnestness in our several divergent beliefs that we can agree to differ with anything like mutual respect. The "homœopath" who can reconcile it with his own conscience to practise what he calls "allopathy" when occasion offers — who, in short, is ready to become all things to all patients that he may win some — can be no true disciple of HAHNEMANN, who, as we pointed out in March, 1875, in connexion with a question arising at the Birmingham Midland Institute, insisted that homœopathy "must be *exclusive*," and that "all backward straying to the pernicious practice of the old school (whose opposite it is as day is to night) is totally impossible." And the practitioner of the regular school who is willing to aid and abet the errant homœopath in his excursions into the province of what we term orthodox medicine, cannot but be regarded by us as a paradox. The position occupied by Dr. KIDD is as strange as it must be unsatisfactory to members of the school with which he is most closely identified. The position taken up by Dr. QUAIN in this matter is at once inexplicable and embarrassing.

It is impossible to regard the consultations which have taken place, between two gentlemen representing antagonistic schools of thought, in the light of serious endeavours to arrive by scientific deliberation at a concerted judgment on the state of their distinguished patient, and the measures to be taken for his relief. One at least of the two must have been lukewarm in his allegiance to the principle on which he had consented to act in the treatment of this particular case, while the other could not fail to feel that he was working with a physician who belonged to a school whose every tenet is opposed to the principles of that which he claims to represent. What could the two men thus thrown together have in common? On what premisses can their argument have been based? The issues at stake were not of a nature to be jeopardised by any lack of concord or earnestness. Life and death may have been in the balance. How should these two physicians work together except they be agreed? Every practitioner must feel that what he does for his patient is to the full extent of his knowledge or belief the best that can be done, or he must defer to the judgment of a colleague in whose

scientific attainments and clinical experience he has the utmost confidence. The status of the doctor and the rank of the patient cannot affect the issue raised. The *bona fides* of the consultants may not be called in question, but the considerations we urge are of the highest gravity, and they cannot either be gainsaid or lightly set aside.

The more strictly professional bearings of the case are not less disturbing. It has a painful interest for every practising member of the body to which we belong. If when the physicians concerned in a matter of this class are men of eminence, and the patient is a distinguished personage, rules of etiquette may be ruthlessly transgressed, it is idle to expect that these rules will be held binding upon practitioners of less note in regard to their ordinary *clientèle*. If homœopaths may at pleasure treat their patients "according to the regular practice of allopathy," and, *when* they do this, regular practitioners are at liberty to consult and act with them, this should be generally understood. It has hitherto been a custom of professional ethics that no sort of intercourse can be held with homœopaths, even when these gentlemen, in defiance of the rule laid down by their master, elect to practise "the old system." The fact that they for the nonce, or for some passing purpose, choose to pose as orthodox, has not been held to condone their error, or render them trustworthy associates for the scientific practitioner. If we are henceforth to recognise a Dutch-clock mode of practice this, we say, should be understood. The effect of such an understanding must, of course, be to foster the development of a class of men who will degrade the art of healing to the level of a service done "to please"; but if this effacement of scientific medicine is to be accomplished with the consent of "leading members" of the profession, common justice requires that the feasibility of such a concession shall be publicly announced and generally recognised. We cannot heap reproaches on the head of some struggling practitioner in an obscure district because he consorts with homœopaths acting or pretending to act "allopathically," while an eminent physician does precisely the same thing with the sanction of his esteemed and trusted brethren in London. The profession, as a whole, has a right to demand that "men of light and leading" shall be at least as punctilious in their own observance of the rules laid down for professional guidance as they expect average members of the medical body to be. We must be absolutely just, without respect of persons, either of physicians or their patients. Let it be settled once for all that there is a single code of ethics applicable to all classes of practitioners and governing their relations with patients, whether these be peers or peasants. It has hitherto been the boast of the medical profession that in the hour of sickness it recognised only humanity in need of succour. It will be a dark day for scientific medicine when this claim to independence and impartiality is waived, and the conduct of professors of the healing art towards each other and towards those who seek their aid comes to vary with the rank the physician and patient may chance to occupy.

Whether we look at this question from the public or the professional standpoint, it must be plainly seen to be one of grave import. There is, unhappily, no appeal except to the general judgment of the profession. The Royal College of Physicians has only too conclusively proved that it cannot be trusted with the decision of questions affecting the *morale* of the profession. If any expression of opinion were extorted from the feeble-minded corporation in Pall-mall, it would be either a condonation of the error into which a distinguished Fellow has fallen, or a stringing together of platitudes with which no sensible practitioner could have any reasonable concern. The profession must decide the question for itself, and in so doing we are persuaded it will be guided solely by the interests of right and fairness. The considerations we submit are, briefly, three. First, that a due sense of the responsibility which rests on every practitioner of medicine to treat his patient on principles in which he has faith and which he honestly believes to be principles of true art, must render it impossible to practise antagonistic and mutually destructive systems of medicine alternatively or indifferently. Secondly, that only men who are agreed and see together as to the fundamental principles of disease and its treatment can consult or act in concert. Third, that the rules which govern the professional conduct of practitioners among themselves and towards their patients must be absolute and apply with equal force to all ranks of the profession and of society. If these propositions are accepted by the judgment of the medical profession, it is easy to see what the decision in this case must be. Dr. QUAIN has violated a fundamental principle of professional conduct in acting with Dr. KIDD, an eminent homœopath, in treating the Earl of BEACONSFIELD "according to the regular practice of allopathy." This is the conclusion which is forced upon us, and it is one in which we believe the profession will feel compelled to acquiesce.

IT is acknowledged to be somewhat of a hardship that the Universities of England do so little to facilitate and encourage graduation in medicine. Nobody who has the reputation of the medical profession at heart wishes to see graduation made too easy. A Doctorate in Medicine ought to mean something more than a common minimum qualification. It may be said that it has not always this significance, and it would not be inaccurate to say so. But there never was a time when it was so little fair or accurate, so to speak. A degree which does not imply some superiority in education or some additional severity in examination, is something very objectionable, and calling loudly for a remedy. But the remedy is not the degradation of the process by which the title of Doctor of Medicine is procured, but the improvement of it. And to do the British Universities justice, they are more alive to the responsibility of their degree-granting function than they have ever been before. Their degrees imply more, and are more difficult to attain, than in any comparatively recent time. In fact, the difficulty of obtaining English degrees in medicine is a ground of complaint. Degrees seem to be regarded by the Universities with rather too much reverence, as something to be reserved for transcendental philosophers and scholars rather than for men who devote their lives to the rough conflict with disease and death. Such is the impracticability of the conditions on which degrees are granted in England, that for the most part English practitioners have either to go without them, or to go to Scotland or Ireland

or to foreign countries for them. This grievance is set forth very ably in a pamphlet with which we have been favoured, by JOHN EDWARD MORGAN, M.D. Oxon., and Professor of Medicine at the Victoria University, Manchester—a statement so able and suggestive that no part of it is indefensible except the apology with which it is introduced. Dr. MORGAN'S question is, Why are there no medical degrees? He shows that in Scotland there are 1889 medical men to whom the Scotch Universities have granted 1207 degrees; in other words, 63 out of every 100 Scotch practitioners have obtained Scotch degrees. In Ireland there are about 3398 medical practitioners, 930 of whom, or 30 per cent., have obtained degrees, chiefly Irish; while in England there are 14,102 medical men, of whom 717, or about 5 per cent., only hold English degrees. This is a very striking statement, and the more it is studied the more worthy of attention it will appear. It is undeniable that the possession of a degree is more or less of an advantage to a practitioner. It carries weight with the public, and is an indispensable condition of holding many medical appointments; yet in England it is very difficult to obtain one. The London University is not a teaching university as the Scotch and Irish universities are, and the teaching universities of England have hitherto shown little sympathy with, or aptitude for, teaching medicine. Dr. MORGAN, though an Oxford graduate, is justly severe on the English universities, and their "gross neglect" to consider the requirements of the medical profession, while heaping favours and degrees on those intended for other professions. Thus we find that during a long period of time Oxford and Cambridge have annually dispensed some 800 or 900 degrees to Bachelors of Arts, but on an average not more than seven or eight of those degrees are bestowed on students of medicine. Dr. MORGAN finds explanations of the neglect of medicine in the whole genius and arrangements of the old universities. The short terms and the long vacations are not adapted to the grave and arduous studies of medicine. Then he points out that the old universities are ill adapted as places for the study of practical medicine, though, with good teachers and liberal prizes for medical work and investigation, we think that much more could be done than is done in this way. Durham, though associated with the Newcastle School of Medicine, which has the advantage of an enormous field for medical and surgical study, has not yet devised means for conferring degrees on any considerable number of persons. Under these circumstances, Dr. MORGAN complains bitterly that the charter of the Victoria University does not confer the power of granting medical degrees. Medicine was included in its original scope, but it was withdrawn in deference to the strong opposition of those who feared to add another to the many competing licensing bodies. This fear was not unnatural in the present state of the law; but with an improved state of the law, with a reformed Medical Council having real powers, with a consolidation of the examining bodies, it should be easy both to stir the old universities into life and action, and to give to a young and promising university power, under strict conditions, to confer degrees in Medicine. Dr. MORGAN contends, too, that the character of the London University should be enlarged; that instead of a mere examining body it should become a teaching one, and make some contribution to that education of medical men which more than mere examination goes to fit members of the medical profession for that high position in society to which, according to Dr. MORGAN, they are destined as States become wiser.

THE pathological relations of diphtheria and the discovery of a micrococcal organism in the false membrane have made it almost certain that the morbid poison which gives rise to the disease is a parasitic organism. The observations to which we lately called attention that bacilli were to be found during life in the urine of patients suffering from the disease, and after death in the kidneys, constitute another step in the demonstration. From a communication to the Paris Société Anatomique we learn that a French "interne," M. TALAMON, has succeeded in cultivating the organisms from eight cases. In the condition of complete development they presented a characteristic mycelium and spores. The former are tubes with partitions, at intervals, from two to five thousandths of a millimetre in length. These, under favourable circumstances, elongate and bifurcate, the bifurcations being characteristic in consequence of their incurved branches, like the sides of a lyre. In other conditions the mycelia do not become elongated, although they multiply so as rapidly to cover the surface of the cultivation liquid; they remain short and assume irregular forms, and give rise to numerous straight rods. The spores are of two kinds, round or oval, which may be termed the spores of germination, and rectangular spores or conidia. The latter characterise the species. They form small rectangles of various sizes, their length being sometimes fifteen thousandths of a millimetre. They may be isolated or united in festoons or zigzag chains. At first homogeneous, they soon become filled with small round granules, highly refracting, and of the size of ordinary micrococci. The round or oval spores are those which, by their elongation, constitute the mycelium. They appear as clear points, from three to five thousandths of a millimetre in diameter, in the middle of a mass of granular material. M. TALAMON has inoculated this organism into the mucous membrane of the mouth or nose, or has given it with the food, in six rabbits, two guinea-pigs, four frogs, a fowl, and four pigeons. The rabbits died at the end of six, eight, ten, and eighteen days. That which died soonest presented an enormous swelling of the neck resembling the œdema of the neck in diphtheria, and due to a serous infiltration of the connective tissue, and the culture of this serosity showed the same organism with the characteristic conidia. The rabbit which died at the end of eighteen days presented a bilateral fibrinous pleurisy, with effusion. The effusion and pleuritic membrane also yielded, on culture, the organism which had been inoculated; and it could be recognised, either by simple microscopical examination or by culture, in most cases in the liquid contained in the pericardial and peritoneal cavities, and often in the kidneys. The organism was never obtained by cultivation of the blood contained in the heart. The liquid either remained clear or presented only ordinary bacteria. In the four pigeons M. TALAMON succeeded in producing characteristic false membranes. He first scratched the mucous membrane of the mouth with a bistoury, and then placed some of the cultivated organism in the interior of the mouth. At the end of twenty-four hours a thick membrane lined both sides of the mouth,

the tongue, the false palate, and the back of the pharynx. It was yellowish-white in colour, and was formed, like the diphtheritic membrane in man, by epithelial cells, fat, micrococci, and bacteria. There were very few of the rectangular conidia, but these were abundantly obtained from the membrane by cultivation. Two of the pigeons died at the end of three days. In one the entrance to the larynx was covered by false membranes, and the trachea was full of a thick mucus from which the organism was obtained by cultivation, as also from the pericardial and peritoneal liquids, but not from the blood. The third pigeon remained ill for eight days, and then the false membranes became separated and the animal recovered. At this point, unfortunately, the experiments have been for the present arrested. They were carried on in the laboratory of the Hôtel Dieu, and some of the physicians, fearing lest some of the organisms might contaminate their patients, stopped the observations. We are promised a resumption of the inquiry at an early period. The facts ascertained are of the greatest importance, and seem to open out an entirely new field of investigation as to the etiology of the disease, since M. TALAMON hints that he possesses a clue as to the source from which the organism is derived in the case of human infection.

THE Report of the Medical Officer of the Local Government Board for the year 1879 has just been issued from the Parliamentary press. The delay in appearance we apprehend must be attributed to the illness and retirement of Dr. SEATON, the changes in the Medical Department rendered necessary by this event having no doubt temporarily disturbed the usual course of its proceedings. The report of the present Medical Officer opens with a graceful expression of regret offered on the part of the "immediate colleagues" of Dr. SEATON at his loss from the Department—a regret presently heightened by his death, which quickly followed upon retirement. Perhaps no subject connected with preventive medicine has been so largely before the public during the past ten years as vaccination, and certainly since the days of JENNER no man has done so much to promote vaccination in this kingdom as EDWARD CATOR SEATON; yet he passed to the grave without any honourable recognition by the Government whom he had so long and faithfully served, and wellnigh unnoticed by the public, who benefited so largely by his great services to them, and who while he was dying were loudly proclaiming the benefits they had derived from him, heedless of the benefactor. "O stormy peple, unsad and ever untrewe," as CHAUCER hath it. In consequence of the delay in the appearance of the report much of the contents of the volume have necessarily been anticipated. Thus, Mr. POWER'S report on an outbreak of "fever" that proved to be of the nature of trichiniasis on board the Reformatory School ship *Cornwall*, Dr. THORNE THORNE'S report of an extensive epidemic of enteric fever at Red Hill, Caterham, and other adjoining places, Dr. AIRY'S report on an outbreak of scarlatina at Fallowfield, near Manchester, and the report by a Committee of the Pathological Society of London on the infective diseases known as pyæmia, septicæmia, and purulent infection, an inquiry carried out by the Society under an engagement entered into with the Local Government Board, all are reproduced in this volume, but all were published separately at the time they were made and were dealt with in the columns of THE LANCET. Mr. POWER'S report, however, obtains a new interest as it appears here. At the time when the report first appeared doubts were entertained as to the precise nature of the nematoid parasite which he had found in the body of the sole patient who had died from the supposed "enteric fever" on board the *Cornwall*. It now appears that this question was submitted to Dr. CHARLTON BASTIAN, F.R.S., and Mr. POWER'S report is followed by one from this gentleman, showing that the nematoid discovered belonged to the Anguillulidæ, genus *Pelodera*, and he has named it *Pelodera setigera*. This determination adds a new and greater interest to Mr. POWER'S report, and Dr. BASTIAN offers some observations on the subject of great value. Of the new matter in the volume we may note a report of series of a careful observations on the results of vaccination by Dr. CORY with animal lymph obtained from Dr. WARLOMONT, of Brussels, and of which Dr. BUCHANAN says: "That in some respects they differed from those which he habitually obtains with long-humanised lymph; that there was no reason for preferring the results of the calf lymph; and that the humanised lymph had, in its arm-to-arm transmissions, the advantage over the calf lymph of showing greater uniformity of action." Other new matter is found in reports by Dr. KLEIN on the lymphatic system of the skin and mucous membrane, and on the results of certain experiments made by him on the inoculation of bovine animals with small-pox; and a continuation of Dr. THUDICHUM'S researches on the chemical constitution of the brain, in view of the determination of some questions in the chemical pathology of that organ. Dr. BUCHANAN, in his own report as Medical Officer, offers brief but suggestive comments on these reports, and details equally briefly the general proceedings of the Medical Department during the year to which the report refers. The brevity of his observations gives rise, indeed, to the main point of criticism to which his report is open. The suggestiveness of several of his observations gives us a desire to have more from him, and we should be disposed to complain were it not that we have in remembrance that it was just in this somewhat abruptedly curtailed fashion of annotation, as it were, that JOHN SIMON commenced the famous series of reports of which this forms a continuation. We are inclined, therefore, to regard this brevity, however much we may regret it for the moment, as a good augury for the future, and to buoy ourselves up with the belief that it is merely the indication of a mental habit which will bear fruit in the future not less famous than that which characterised the reports of the first holder of the office which Dr. BUCHANAN now fills.

THE question of competitive examinations for public appointments is one which deserves the serious consideration of all who are interested in the welfare of the young. It is no doubt a matter of importance that the appointments in our public offices and in our Army and Navy should be filled by well-educated young men competent to discharge the duties, physical and mental, which devolve upon them, and likely to remain efficient in both respects for a reasonable period, unforeseen accidents excepted. To ensure these conditions it appears requisite that they should have been well taught those branches of knowledge which are required

of them, and that their education should have been so conducted as not to have injured their bodily health or overstrained their mental powers in the preparation for the competition on which their subsequent career may depend. We greatly fear that these indispensable conditions are too often lost sight of by the authorities on whom rests the responsibility of conducting the examinations, and that, as a result, youths come up crammed but not educated, and with constitutions often seriously damaged by overwork. Young men entering the service under such conditions are not likely to prove efficient for any length of time, either mentally or physically. The knowledge—if it deserves that name—which has been driven into them by the crammer is too often lost with even greater rapidity than it has been acquired, and the remembrance of what they have gone through gives them a distaste for mental work which prevents any exertion in the direction of self-education. A clerk under such circumstances degenerates into a bad copying machine; while an officer in the Army or Navy turns out a useless encumbrance, not to be relied on in an emergency. We are far from saying that this is applicable to all who go successfully through a competitive examination, for we have known very many who have entered the public service as a result of preparation honestly made, and in whom the effects of such a course were manifest throughout their subsequent careers. But we cannot disguise the fact that there is a large amount of very unsatisfactory work, the outcome of which is injurious alike to the public and to the successful competitor. We have been led to make these remarks by the receipt of a Parliamentary paper entitled "Regulations respecting Naval Cadets." In future, appointments to naval cadetships are to be made by limited competition. The candidate must not be less than twelve nor more than thirteen and a half years of age, and must be found physically fit for the Navy by a medical examiner. Let us now see what he is required to know in order that he may be entered for training on board the *Britannia*. In the preliminary examination are comprised—arithmetic, including proportion, vulgar and decimal fractions; algebra, including fractions and simple equations with one unknown quantity; geometry—definitions, postulates, axioms, and subjects of the first twenty-six propositions of Euclid's Elements; English—writing from dictation, reading with intelligence, and parsing easy sentences; French—translating, by aid of a dictionary, French into English, and English into French, reading, parsing, and speaking; Scripture history. If the boy is successful in passing this examination—and to do so he must obtain at least four-tenths of the marks assigned to each subject,—he is then examined on any two he may select of the following subjects: elementary mathematics; miscellaneous questions in arithmetic, algebra, including quadratic equations, and geometry to the end of the first book of Euclid's Elements; Latin—reading, parsing, and translating, by aid of a dictionary, Latin into English, and English into Latin; geography and English history, outlines. We should like to know the opinion of any good master, accustomed to boys of that age, as to the probability of their really having acquired such a knowledge of these subjects as they would be likely to retain, and turn to use in their subsequent career. We entertain strong doubts of their ability to do so, and feel satisfied that many boys must break down in the attempt. It is intended that so many candidates shall be nominated that not more than one-third of those examined will be entered. Now, we would ask, is it fair to the boys to require them to work up for such an examination with the certainty that two-thirds of them must fail to obtain the object of their labour? Is it just to their parents to put them to the expense of educating their boys for a special profession with such odds against them being permitted to follow it? Is it humane to make the subjects of a competitive examination so much above the ordinary capacity of boys at that age as to render it probable that many of them may break down in preparing for it, and receive no compensation for perhaps a lifelong injury? The authorities appear either to have forgotten the age of the candidates in laying down the subjects for examination, or to have made it unduly severe to deter numbers of otherwise eligible boys from endeavouring to enter the service. We sincerely trust that the Lords of the Admiralty will reconsider the whole matter, and adopt a standard of qualification for admission more suited to the physical capabilities of boys. Mr. BRASSEY knows what the requirements of the service are, and we trust he will, from motives alike of fair play and humanity, take up the subject with a view to placing the whole question on a more reasonable footing in the interests equally of the Navy and of the ambitious youngsters who long to adopt it as their career.

Annotations.

"Ne quid nimis."

THE ROYAL COMMISSION ON THE MEDICAL ACTS.

WE have good reason to believe that our arguments have prevailed, and that the Government has abandoned the idea of a Commission on Medical Acts in which medical men should be conspicuous by their absence. Having determined to include medical men, it is next most important that the selection should be such as to elicit the truth as to the existing bodies which regulate the medical education and conduct the medical examinations of the country. The medical men to be chosen should be such as to represent not merely the Medical Council and the medical corporations, but the general body of the profession, who are most familiar with the wants of the public and with the existing defects in medical legislation. It would not be fair to medical men favourable to reasonable changes either to leave them out or put them in a minority—as against the champions of existing arrangements. We have throughout believed in the earnestness of the Government in this matter, and our faith serves us still. We look confidently to a Commission so composed as to command the respect of the medical profession and of the public.

MYOPIA IN SCHOOLS.

THOUGH it is desirable that public attention should now and then be directed to questions of the hygiene of vision, it is hard to believe that the risks and dangers, as well as the alleged frequency of grave ocular defects, have not been somewhat exaggerated. Awhile ago the schoolmaster was sent abroad, rod in hand; now it is the oculist that is playing the part of "bogey." The public have barely recovered from the scare of the perils to which they are alleged to be exposed in consequence of the prevalence of colour-blindness among engine-drivers, signalmen, pilots, and others, before

they are startled by the information that our public schools "are manufacturing a race of shortsighted people." There may be, and doubtless is, some modicum of truth in this opinion recently given by an ophthalmic surgeon respecting the boys at Wellington College; but the statement that the public schools are manufacturing a race of myopes is not true to anything like the same extent as that matrimony is doing so. Myopia, and the tendency to myopia, are usually inherited, and it is not an uncommon thing to find a large family of children all inheriting myopia from one parent; but few persons would on this account alone recommend universal and perpetual celibacy. Myopia may, no doubt, be developed, and the tendency to myopia may be aggravated by neglect of the known physiological conditions of healthy vision, and it is therefore incumbent upon all persons concerned in the construction of school buildings, and upon those who have charge of the education of children and youths, to take care that these conditions are strictly observed. As regards our public schools and universities, however, it should not be forgotten that shortsightedness is a fashionable complaint. Myopia has been said to be an affection of those who read much and think little; it fairly belongs, therefore, to the present age.

CONTINUED ILLNESS OF THE EARL OF BEACONSFIELD.

THE Earl of Beaconsfield has, during the week, passed through a series of sudden and seemingly critical changes of condition. The gout has been, from time to time, apparently localised, and the bronchitic symptoms have been temporarily relieved; but the periods of respite have not been long, although they have, doubtless, afforded the system an opportunity to recover itself after each attack, so that, on the whole, the strength of the sufferer has been maintained. A very serious paroxysm of the associated congestion and spasm occurred in the early morning of Thursday, and the danger to life appeared so imminent that, at the personal request of Dr. Quain, Sir William Jenner visited Lord Beaconsfield. It is needless to say that Sir William simply acted in the emergency with Dr. Quain *only*, and did not take part in any general consultation. It is difficult at the time when we write to add much to the statement made last week; but considering the length of the illness, and looking to the fact that the severity of the attacks does not abate, the out-look cannot but be regarded as more than commonly threatening. At the same time it is a favourable feature in the case that the noble lord has taken a fair amount of nourishment, and in the intervals of his more urgent sufferings exhibited considerable cheerfulness. The discouraging circumstance in the clinical aspect of the case is the non-development of the local disease, and consequent perpetual dispersion of the poison throughout the system. It is now, moreover, late in the progress of the case to hope for relief from localisation! The strength of the patient is seriously exhausted. Meanwhile we would cherish the maximum of reasonable hope.

AN APOLOGY FOR THE OPIUM TRADE.

DEPUTY SURGEON-GENERAL W. J. MOORE discusses at some length the opium question, with particular reference to the case of China and our trade, in the *Indian Medical Gazette* of September and October respectively. The papers are very interesting and contain a good deal of information. The author regards the use of opium in China and other countries as very comparable to the use of alcohol in this country. He is disposed to extenuate its injuriousness and to magnify its uses. The Chinese take it, almost need it, he argues, on account of their poverty. It reduces waste of tissue, and it gives a more pleasant aspect to a life of monotony and poverty. In excess it is undoubtedly injurious, and may merit the strong censure that philanthropists have indulged in, but "it is not more injurious than alcohol in excess," and opium taken in moderation is not injurious. Seeing that the Chinese will have opium, they had better have the better sorts that we supply from India than the worse native forms of it. There is no stronger moral reason for opposing the opium trade than the trade in alcohol. The fact that some Chinese "take opium in excess is no moral reason why trade should be restricted further than by the imposition of Custom dues." The *tu quoque* retort upon all European philanthropy in regard to this question is, we think, rather too strongly used. We do not desire to be narrow or too austere in our views, but we scarcely see the necessity for medical men to become the apologists of such customs as the use of opium. If it be true that it is made necessary by the social condition of the people, so much the worse for the social condition. It is not worse as a national habit than the use of alcohol by European nations—which we very much question—even then two blacks do not make one white. It is only fair too to British philanthropists to say that those who oppose the opium trade oppose the alcohol trade. An enormous amount of quiet scientific opinion is expressed against our national use of alcohol, which is telling slowly upon sensible people in all ranks of life. But we may still have a word to say against the use of opium by other nations. The duty of medicine, as we take it, is not to find apologies for the bad habits of nations, but to try to bring national habits into conformity with the laws of health. The opium trade is another question, and it has two sides, but, from our point of view, we cannot recommend even a poor Chinaman to begin the use of opium in the hope that he will do it moderately. It is not likely either to lessen his poverty or assuage his misery.

SYPHILIS AND LOCOMOTOR ATAXY.

IN a communication to a recent number of the *Centralblatt für Med. Wissenschaften*, Erb has published an additional and important series of facts regarding the relation of syphilis to locomotor ataxy. They are in perfect agreement with the results which he has previously published, and with those brought forward by Dr. Gowers in our columns (THE LANCET, January 15th, p. 94). Of one hundred consecutive cases of tabes, only twelve gave no history of a chancre or secondary symptoms. In fifty-nine there was a history of secondary syphilis, and in twenty-nine of a chancre without secondary symptoms, making a total of eighty-eight in which there was either a venereal sore or constitutional syphilis. Of the twenty-nine cases with a chancre only, eleven were known to have been so treated (with mercury or iodide) as to make it probable that the sore was a hard one. The interval between the primary sore and the first symptoms of the ataxy was ascertained in eighty-eight cases, and it was between three and five years in seventeen cases, between six and ten years in thirty-seven cases, between eleven and twenty years in twenty-four cases, and more than twenty years in ten cases. In order to ascertain the truth of the objection that the large percentage of cases of ataxy with preceding venereal sores or constitutional syphilis is due simply to the commonness of the latter, Erb has investigated the history of four hundred individuals over twenty-five years of age, who were under treatment for diseases which were not suspected to have any relation to syphilis. The percentages of each hundred agreed very closely, and that for the whole four hundred was—a history of a chancre only, 11 per cent.; a history of secondary syphilis, 12 per cent.; and no history of either chancre or constitutional syphilis in 77 per cent. Thus, 23 per cent. had had a chancre or constitutional syphilis, while among the ataxic

patients taken from the same social classes the proportion was no less than 88 per cent. Erb concludes that these figures justify the assumption that there must be an etiological connexion between syphilis and locomotor ataxy.

THE DEADLY EAST WIND.

FROM the earliest times the east wind has been proverbially stigmatised as inimical to life in all its forms, and generally disastrous in the influence it exerts on living organisms. Authorities differ as to the precise cause of its destructive properties; but all agree in describing the wind as peculiarly acrid and withering. It is dry itself, and seems to extract the moisture from every tissue with which it comes in contact. Of all winds, that which blows from the east is the most likely to check the insensible perspiration, to chill the surface, and to produce "cold." It is even possible the wind may be laden with germs which produce a specific effect on the lining membranes of the air-passages. However that may be, there is the strongest reason to believe that the terminal filaments of the nerves distributed in the skin are mechanically compressed by the contraction occasioned by this "eager and nipping air." Those who are well able to resist the onslaught of other winds cower before the east, while the sick grow worse while it blows, or are unable to rally in such a way as to shake off the incubus of disease. In respect to no inclemency of the weather is it more necessary to fortify the body, through the mind acting indirectly through the nervous system, than this common enemy from the east. To give way to mental depression in the struggle is to yield ground. The man who fears that he will "take cold" is almost sure to do so. Conversely, a "good heart" is as trusty a protection as a warm "comforter"; albeit, no one should scruple to have recourse to extra clothing while the wind blows from the east, and particularly when it remains long in that quarter. Few but the most sturdy can hold out against a prolonged assault.

MR. WHARTON JONES, F.R.S.

THE profession will learn with regret that Mr. Wharton Jones has retired from his connexion with University College and Hospital as Professor of Ophthalmic Medicine and Surgery, and as Ophthalmic Surgeon, respectively. The connexion thus severed has extended over thirty years, and covers the student life of several generations of medical practitioners. Those who cherish an affectionate and respectful remembrance of the days when the name of this distinguished ophthalmologist was a household word throughout the schools of the United Kingdom and on the Continent, cannot yield to their juniors in the esteem which is felt for Mr. Wharton Jones. We trust that, though the fulness of years and that natural yearning for rest which comes in the autumn of a busy life, have compelled this retirement from collegiate and hospital work, Mr. Wharton Jones may long be spared to use his ripe knowledge and experience for the advantage of the profession and the public.

MISSED LABOUR.

AT the March meeting of the Obstetrical Society a paper was read by Dr. Barnes on Missed Labour, in which the author entered exhaustively into the subject. Full details of a case which had occurred under the observation of Dr. Barnes himself were given, and in which gestation had been greatly prolonged. The discussion upon it was adjourned till last Wednesday. Such cases have a pathological as well as medico-legal interest, for the possibility of the retention of the fœtus within the body of the mother for months or years after the full period of gestation has elapsed has bearings of the greatest importance from a social point of view. Though such occurrences are rare, yet there are several such cases on record, the genuineness of which cannot be doubted; and the possibility of the accident—for such it must be regarded—is beyond dispute. It happens, however, it appears, only when the fœtus is dead. In the recorded cases there appears to be usually a history of some accident or injury, and upon this fact, together with the observations made post mortem, Dr. Roper based an ingenious theory—namely, that cases of missed labour are cases in which rupture of the uterus had taken place and the child had escaped through the rent into the surrounding tissues or abdominal cavity. In the case observed by Dr. Barnes, he seems to have convinced himself that the fœtus was in the cavity of the uterus by the introduction of the hand into that cavity; but though such an observation made by such an observer is of the greatest value, it cannot take the place of examination after death. The theory of Dr. Roper is not incompatible with Dr. Barnes's observation, and the question cannot be settled but by careful post-mortem investigation.

DR. ACLAND ON ALCOHOL.

DR. ACLAND, at the special request of the Oxford Ladies' Diocesan Branch of the Church of England Temperance Society, lately delivered an address at the residence of the warden of Keble College, on the invitation of the Hon. Mrs. Talbot. Dr. Acland presented to his audience one aspect of the pathological argument against the excessive or frequent use of alcohol. He was on firm ground in charging alcohol with the frequent causation of cirrhosis, especially in the form of spirits, and *à fortiori* when these are taken neat and without food. Of the thirty-six patients that Frerichs observed suffering from cirrhosis, twelve confessed to drinking brandy in excess, and several others were suspected. It is only fair, however, to say, in Frerichs' own words, that in a large number of cases it would not be right to attribute the disease to abuse of spirits. In some of these cases it is quite possible that a tendency to the disease has been inherited. Dr. Acland did not tell his fair audience how far they might go in the use of "a little wine" without incurring the terrible consequences which he portrayed. Ladies, though they have taken a very creditable share in the reform of the drinking customs, have yet a lingering preference for the stronger wines, notably for a little "red port," though their sedentary lives make this a very bad wine for them. If they could be induced to take as favourable a view of light wines as physicians take, an important advance would be made in the direction of physiological temperance.

ARMY MEDICAL SCHOOL, NETLEY.

THE forty-second session of the Army Medical School was opened on the 4th inst. by Professor Aitken, F.R.S., who, in the presence of his colleagues and the staff of the Royal Victoria Hospital, gave the introductory lecture, taking for his theme the progress of medicine in the last twenty years. It is hardly necessary to say that the learned lecturer handled his subject with the fulness of knowledge and clearness of expression to be looked for from an author and teacher of his now European reputation. Forty surgeons on probation for the British Army, and twenty-two candidates for commissions in H.M. Indian Army, listened with marked attention to this instructive lecture, so well calculated to stimulate the minds of young medical officers to prepare themselves for "honourable mention" in the record of the medicine of the future. It was with much regret we noticed the absence of naval uniforms on the benches of the lecture-room at Netley. This is a mysterious subject, on which we shall only observe that, judging from the qualifications of young medical officers for the public services, as

indicated by the marks both of the London and Netley examinations, no class stood more in need of a course of special instruction than the young men who of late years have entered the medical service of the Royal Navy.

INDIGNITIES OF THE CENSUS PAPER.

EITHER the actual framers of the Census forms had an original notion of the duty devolving upon them, or their instructions were extraordinary. In the direction for the enumeration of occupations the professions are thus strangely indicated:—"Physician," "Surgeon," "Dentist," "Oculist," "General Practitioner," &c. The idea of placing an "Oculist," who must by law be a qualified surgeon, below a "Dentist," who for anything known to the law may be a registered blacksmith, would be simply grotesque but that it is significant of the ignorance or error which prevails in official circles. It may be interesting to the authorities to know that the result has been that ophthalmic surgeons generally have declined to describe themselves as "oculists," and the returns will, therefore, be valueless in so far as this point of information is concerned. Like blunders have, we believe, led to similar vitiations of the Census in other respects.

A SUBSCRIPTION LIST has been opened for the purpose of perpetuating by a substantial testimonial the recollection of Mr. Frank Buckland's services to Natural History and Fish-Culture, and generally of affording to the public an opportunity of paying a tribute of respect to his memory and appreciation of his life-long work. It is intended to expend a portion of the sum subscribed upon a bust of Mr. Buckland, to be placed in the Museum at South Kensington, with the collection which he so generously bequeathed to the nation. It is further hoped that the amount collected may be sufficient to supplement the income of Mr. Buckland's widow by an annuity of £100. Should there be any surplus after the purchase of the bust and the annuity, the Committee propose that it should be applied to promoting the welfare of the fishermen of this country—an object which Mr. Frank Buckland had so much at heart. Subscriptions will be received by Messrs. Cox and Co., Bankers, Craig's-court, Charing-cross, and at 34, Portland-place, by the Hon. Secs., Mr. T. Douglas Murray, and Lieut.-Col. E. S. Bridges.

IMPERFECTION of vision in railway *employés* has formed the subject of legislation in the Massachusetts Representative Assembly, to which the Railway Committee has reported a Bill to the effect that "No railroad company shall employ any person in a position requiring the distinguishing of form or colour signals, unless such person within two years next preceding has been examined for colour-blindness and other defective sight by some competent person, and has received a certificate that he is not disqualified, by reason of any defect of vision, to perform the duties of such a position."

A SUCCESSFUL case of colotomy has been performed at Malta, in a case of malignant disease of the rectum, the operator being Surgeon-General W. A. Mackinnon, C.B., the principal medical officer of the station. We are informed that this is the first occasion on which this operation has been performed in the island.

THOSE of our readers who are contemplating a visit to Boulogne during the Easter holidays should take the precaution of being revaccinated, as small-pox is understood to be very prevalent in the French watering-place, and the authorities are, to put it mildly, not over-anxious that the fact should be known.

AN effort to amend the present mode of administering the relief which the Surgical Aid Society has to offer was, at a meeting of the committee at the City Terminus Hotel on Monday, unsuccessful. A resolution with the above object was rejected by 37 votes against 8. Still we are of opinion that, by the society's rules, a great deal of unnecessary worry and trouble is demanded of applicants, in order to obtain the help which the institution was established to afford.

AT the Royal Institution on Wednesday the Faraday Lecture was delivered by Professor Helmholtz, who took for his subject the "Modern Development of Faraday's Conception of Electricity." The discourse was, as was to be expected, a masterly exposition of the direction and scope of the discoveries and experiments of the great chemist, the admirers of whom will welcome the publication of this lecture in a complete form.

WE regret to learn of the early decease of a very promising young French surgeon, Dr. W. H. E. Gregory of Bordeaux. Dr. Gregory was of English descent, but had resided at Bordeaux all his life, and at the time of his death was *prosecteur* at the medical school of that city. He recently brought out a small work on External and Internal Urethrotomy, in which he attempted to prove the great value of the former, and the dangers of the latter, operation.

A SPECIAL meeting of the Epidemiological Society will be held at University College on Wednesday, April 13th, at 8 P.M., when a paper will be read by Surgeon E. G. Russell, M.B., B.Sc., entitled "Certain Points in connexion with Malarial Fevers in India."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Diphtheria (Dr. AIRY).—In February of last year, Dr. Airy received instructions from the Local Government Board "to visit some of the subdistricts, in which it appeared, by the Registrar-General's Returns for the fourth quarter of 1879, that there had been strongly localised outbreaks of diphtheria, in order to inquire as to the behaviour of this disease among small communities." The result of this inquiry is now before us, and includes an investigation of thirteen local outbreaks of this disease in various parts of the kingdom. Although this carefully conducted investigation has led to no new light being thrown upon the malady, it has contributed a good deal to a clearer insight into questions previously debated, and has proved very suggestive of directions of further research. Dr. Airy has considered the results of the inquiry as they bear upon topography, the duration, extent, and novelty of the epidemic in the locality affected, the concurrence or recent prevalence of other diseases in the locality, the local and personal conditions predisposing to diphtheria, the communicability of the disease, &c., and on each of these subjects his observations deserve attentive consideration. He offers also certain suggestions and inferences on the origin and ultimate pathology of the disease. As to the former question, he thinks the inquiry leaves no escape from Dr. Sanderson's conclusion, "that unless it be supposed that the material cause of diphtheria is from time to time generated *de novo*, it is *capable of existing and moving from place to place independently of its subjects*." As regards the second question he has the following observations:—"The supposition that diphtheria, in the origin of an outbreak, is caused by an organism that haunts air, or water, appears to me to conform most closely to the requirements of

observed fact. It is quite reasonable to suppose that such an organism, having a subsistence dependent upon seasonal conditions, should have its own special season of maximum growth and reproductive power; that it should be capable of infecting water or milk; and that it should affect preferentially a particular character of soil, such as clay, and avoid the smoky purlieus of a town. The preference of diphtheria for dwellings in exposed and elevated situations is difficult to explain on any theory, except that of exposure to the wind and to whatever the wind may carry. (For valuable arguments and suggestions in support of this theory I would refer to Mr. A. Wynter Blyth's paper cited above.) Such facts as that of the immunity of town children attending a country school could be understood, if we suppose that the country children, taking another direction, breathed air containing an organism which the town children escaped. Possibly the 'progressive development of infectiveness' observed by Dr. Thorne at Llanrhaiadr might correspond (as Dr. Thorne has himself suggested) to progressive development of the organism towards the attainment of full reproductive power. Such an organism might be expected finally to yield itself to microscopic identification in its (supposed) native haunts."

Enteric Fever at Pemberton and Orrell (Dr. AIRY).—This report by Dr. Airy is directed to the elucidation of a serious outbreak of enteric fever at Pemberton and Orrell, in Lancashire, in the autumn of 1880. Abundant evidence was found in the state of privy nuisance, and doubtful condition of water-supply as to excremental pollution, to account for much prevalence of enteric fever in the localities; but it was found impracticable to disentangle the influences of these several sources of the disease in the production of the particular outbreak, or determine the probable mode in which the gravity of the outbreak had been brought about.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Doncaster (*Rural*), *Goole* (*Rural*), *&c., Combined Districts.*—Dr. Mitchell Wilson's reports for the several sanitary districts entering into the combination for which he is medical officer of health contains much of interest. These districts include Doncaster, Goole, and Tadcaster *rural* districts; and Goole, Selby, and Tickhill *urban* districts. They contain an estimated population of over 83,000, and had in 1880 a death-rate from all causes of about 19·0 per 1000 inhabitants. Dr. Wilson has some useful remarks about the influence of *dampness* of houses upon the health of the inmates, and points out how this dampness is apt to occur in rural districts from the floors of the cottages being placed on undrained ground, from the absence of any damp-proof course in the house-walls, and from the want of any pipes to carry off rain-water from the roofs. "Landlords," he writes, "far too often look upon the latter as a convenience only useful for the tenants in collecting soft water, instead of considering the bad effect on the foundation and walls of the house." Dr. Wilson is inclined to believe from his observation of typhoid fever that it is directly infectious, or at least that direct infection plays a part in its dissemination, and he draws attention to attacks of a febrile indisposition, which were different from the ordinary attacks of typhoid fever both in point of duration and intensity, but which are observed occurring at the same time and under similar conditions as typhoid. He observes: "An interesting point in connexion with these mild febrile cases is, have the dejecta the power of conveying to other persons the infection of true enteric fever? If so, and occasional cases seem to point in that direction, they will supply the link which is so often missing in tracing out the sequence of outbreaks of this fever." Dr. Wilson has also some suggestive observations on the application of by-laws in rural districts, and the present anomalous state of the law on the subject. A series of recommendations for securing the healthiness of houses, issued with the sanction of the Goole Rural Sanitary Authority, is stitched up with the reports.

Reigate (*Urban*).—Estimated population, 1880, 18,800; birth-rate 27·2 per 1000 inhabitants; death-rate 14·7. Mr. Jacob comments on the very low mortality of this urban district during 1880, a mortality which would have been designated as low even in a rural district. The district was, moreover, remarkably free from most of the dangerous zymotic diseases during the year. Not a single case of typhoid fever was reported at Redhill, showing how completely that portion of the district had shaken off all traces of the epidemic which accidentally visitedit in the previous year.

Eccleshill (*Urban*), *Yorkshire.*—Estimated population, 1880, 7000; birth-rate 36·0 per 1000 inhabitants; death-rate 17·0. Mr. John Pitney Aston, in reporting upon the state of his district in 1880, by no means confines himself to the bare account of its health-condition, but endeavours to make his report interesting by giving to it, not unsuccessfully, certain literary graces. These, however, we must put aside, contenting ourselves with noting a progressive improvement in the mortality of the district during the past three years; the local peculiarity of three main sewers converging to *blind* terminations within fifty yards of the Mechanics' Institute, which we presume represents the intelligence of the town; and certain observations on privies. Mr. Aston is eloquent upon the ill-chosen position of these conveniences in many country houses and country places and the discomforts arising therefrom, and further, he says of their construction:—"Instead of being a bright, cheerful, little chamber, where you might pass five or ten minutes with a certain amount of comfort, and moralise on things in general, it is a cold, damp, repulsive room, which gives you the shivers to look at." This is in the right vein.

Epsom (*Urban*).—Estimated population, 1880, 7550; birth-rate 24·2 per 1000 inhabitants; death-rate 13·2. Mr. Jacob gives an interesting account in this report of a circumscribed outbreak of typhoid fever, probably caused by the entrance of sewage into the well of the town water-works through an overflow pipe which passed from the well into the town sewers. During a heavy downfall of rain the sewers are apt to become overcharged, and a fortnight or so before the fever appeared this had happened, and the water had risen in the manholes of the sewers to a height of seven feet above the level at which the overflow pipe from the well leaves it. It is tolerably certain that at this time there must have been a flow from this pipe of the contents of the sewer into the well, and Mr. Jacob shows that the circumstances of the fever, its mode of occurrence, and limitation of prevalence might very well be accounted for on the supposition that sewage had in this way become mingled temporarily with the well-water. The overflow pipe was at once closed and this source of danger removed.

Romford (*Rural*).—Mr. Alfred Wright reports for this district in 1880 a birth-rate of 34·9 per 1000 inhabitants, and a death-rate of 18·7. In considering the health-condition of the several parishes entering into the district he writes favourably of all except Barking and Ilford. Barking does not appear to exhibit many indications of sanitary improvement, and the newer and higher portion of the town is described as having no system of drainage, the sewage being discharged into private cesspools; and, as to Ilford, it is stated that although a system of drainage does exist, it is so imperfect "as really to be worse than none at all."

Whitechapel (*Metropolis*).—Mr. John Liddle reports that the death-rate of this district in 1880 was 24·3 per 1000 inhabitants, as compared with 26·0 in the preceding year. The tabular statements of sanitary work performed during the year show an astonishing amount of detailed supervision and inspection exercised by the officers of the sanitary authority. Mr. Liddle's annual report for 1880 appears as a part of his report for the last quarter of that year. In this last-named report he has some weighty observations on the want of more stringent regulations in the construction of houses.

TRICHINOSIS.

The Local Government Board for Ireland have recently issued a circular calling attention to the disease which has been attributed to the consumption by human beings of the imperfectly cooked flesh of pigs infested by trichinæ and similar parasites. It is upon the imported flesh of foreign pigs that special precautions should be taken, and the circular points out that the only means of avoiding disease in man from diseased pigs is by very thorough cooking. The Board also remind the sanitary authorities of the powers which they possess under sections 132-136 of the Public Health (Ireland) Act, 1878, in relation to the sale of unsound, diseased, or unwholesome meat, and suggest that they should enjoin their medical officer of health and sanitary sub-officers, to use special vigilance in carrying out the provisions of the above sections referred to.

On the 23rd ult., a meeting of representatives of the sanitary authorities of three counties was held in the County

Hall, Denbigh, to consider the action of Mr. Murray Browne (Local Government Board Inspector) and the Local Government Board in thrusting upon them a scheme for combination to appoint a single medical officer of health, against the wishes of the several authorities proposed to be united, and also against the opinion of the county (Denbighshire). Objection to the action of the Local Government Board seemed to be taken by the various speakers almost as much on account of the manner in which that Board had brought forward its proposal for combination as against the principle. It was determined to send a deputation to Mr. Dodson to make known to him the objections of the several authorities to the scheme, and, we may add, their determination to resist it.

Colonel Bolton, R.E., the water-examiner, reports that during the month of February the water in the Thames, at the intakes of the metropolitan companies taking supplies therefrom, was bad in quality from Feb. 1st to the 6th; from the latter date to the 23rd somewhat improved, but indifferent in condition; afterwards good to the end of the month. The water in the River Lea was generally good throughout the month. Most of the water, however, was delivered to the consumers clear and effectually filtered. Messrs. Crookes, Odling, and Tidy report that "the water supplied during the past month (February) was wholesome, of good quality, and well oxygenated."

A striking illustration is reported from Fulham of the danger of the spread of the disease arising from keeping small-pox cases in private houses. An instance is recorded of an unreported case there, from which contagion of the disease was conveyed to and infected twenty-seven other cases.

At a special meeting of the St. Pancras vestry on Monday, a motion affirming the expediency of providing a small-pox hospital for the parish was agreed to. The report of the Sanitary Committee recommended a site at Finchley; but it was decided that preference be given to a plot of ground adjoining the workhouse and the St. Pancras-gardens.

An outbreak of scarlet fever is reported to have broken out at the Fulham Small-pox Hospital. Eleven of the nurses have had to be removed to the Stockwell Fever Hospital.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Mortality in the large English towns, although showing a slight further increase, continues considerably below the average for the season. In twenty of the largest English towns, estimated to contain in the middle of this year nearly a third of the entire population of England and Wales, 5531 births and 3191 deaths were registered last week. The births exceeded by 345, while the deaths were 66 below, the average weekly numbers during 1880. The deaths, however, showed a further increase of 28 upon the low numbers returned in recent weeks. The annual rate of mortality, which had been equal to 20·6 and 21·7 in the two preceding weeks, further rose to 21·9 last week. The lowest rates in the twenty towns were 13·6 in Leicester, 17·2 in Sheffield, 17·5 in Norwich, 18·5 in Bradford, and 18·9 in Newcastle-upon-Tyne. The rates in the other towns ranged upwards to 25·6 in Hull, 26·2 in Bristol, 28·4 in Oldham, and 28·8 in Manchester. During the thirteen weeks ending on Saturday last the death-rate in the twenty towns averaged only 23·9 per 1000, against 25·7, the average rate in the corresponding periods of the five years 1876–80.

The deaths referred to the principal zymotic diseases in the twenty towns, which had been 287 and 321 in the two preceding weeks, were 315 last week; these included 66 from whooping-cough, 60 from scarlet fever, 55 from small-pox, 50 from measles, and only 28 from fever, principally enteric. The annual death-rate from these principal zymotic diseases averaged 2·2 per 1000 in the twenty towns, and ranged from 0·5 and 0·7 in Birmingham and Plymouth, to 2·8 and 5·4 in Liverpool and Wolverhampton. Whooping-cough showed the largest proportional fatality in Portsmouth and Liverpool; and scarlet fever in Wolverhampton and Sunderland. The 20 deaths from diphtheria in the twenty towns included 10 in London, 2 in Portsmouth, 2 in Birmingham, and 2 in Liverpool. The highest death-rate from fever (probably enteric) occurred in Wolverhampton. Small-pox caused 60 more deaths in London and its outer ring of suburban districts, one in Newcastle-upon-Tyne, and not one in any of the eighteen other large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 853 and 820 in the two preceding weeks, rose last week to 899, a higher number than has been under treatment in these hospitals since 1877. The number of new cases of small-pox admitted to these hospitals during last week was 256, against 265 and 147 in the two previous weeks. The Highgate Small-pox Hospital contained 87 patients on Saturday last, against 74 at the end of each of the two preceding weeks; 33 new cases were admitted during the week.

The deaths referred to diseases of the respiratory organs in London were 358 last week, against 345 and 348 in the two previous weeks; they were, however, no less than 131 below the corrected average number in the corresponding week of the last ten years, and included 221 which resulted from bronchitis and 88 from pneumonia. The annual death-rate from lung diseases, exclusive of phthisis, was equal to 5·0 per 1000 in London last week; while the rate from the same diseases was 7·0 in Liverpool.

The causes of 88, or 2·8 per cent., of the deaths in the twenty towns last week were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths was equal to 2·1 per cent. in London, while it averaged 3·4 per cent. in the nineteen provincial towns. No uncertified causes of death were recorded last week in Portsmouth, Norwich, Leicester, or Nottingham; whereas the proportions of such deaths was largest in Hull, Leeds, Bradford, and Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week declined to 20·7 per 1000, from 23·1 and 23·5 in the two preceding weeks; this rate was 0·2 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 16·9 and 17·0 in Paisley and Dundee, to 22·3 and 33·1 in Glasgow and Perth. The deaths referred to the principal zymotic diseases in the eight towns, which were 97 and 75 in the two preceding weeks, declined to 69 last week; they included 19 from diarrhœa, 16 from whooping-cough, 12 from diphtheria, 10 from measles, 7 from scarlet fever, 5 from "fever," and not one from small-pox. The annual death-rate from these zymotic diseases was equal to 2·7 per 1000 in the eight towns, which was 0·5 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 0·0 in Perth and 1·1 in Paisley, to 3·0 in Glasgow and Aberdeen and 3·6 in Edinburgh. The 19 deaths referred to diarrhœa showed an increase of 7 upon the number in the previous week, and considerably exceeded the average number in the corresponding week of recent years. The fatal cases of whooping-cough, which had been 31 and 27 in the two preceding weeks, further declined to 16 last week, of which 6 occurred in Glasgow, 5 in Dundee, and 3 in Edinburgh. The 12 deaths referred to diphtheria also showed a decline from recent weekly numbers, and included 9 in Glasgow and 2 in Edinburgh. The 10 deaths from measles, on the other hand, exceeded the numbers in recent weeks; 7 occurred in Glasgow and 3 in Aberdeen. The deaths from scarlet fever, however, further declined from 13 and 10 in the two previous weeks to 7, of which 6 occurred in Edinburgh and 1 in Leith. The 5 deaths referred to "fever" also showed a further decline, including 3 in Glasgow and 1 each in Edinburgh and Greenock; the death-rate from this cause in the eight towns was identical with that which prevailed in the twenty English towns during the week. The deaths referred to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy), which had steadily declined from 179 to 138 in the four preceding weeks, were 146 last week, and equal to an annual rate of 5·8 per 1000, against 4·1 from the same diseases in London.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, although again excessive, showed a decline last week. The annual death-rate, which had been equal to 30·4 and 34·9 in the two previous weeks, declined again to 30·8 last week. During the thirteen weeks ending on Saturday last the death-rate in the city, however, averaged 37·8 per 1000, against 23·4 in London and 22·3 in Edinburgh.

The 197 deaths in Dublin last week showed a decline of 26 from the number in the previous week, and included 15, or nearly 8 per cent., which were referred to the principal zymotic diseases, against 11 and 19 in the two previous weeks. These 15 deaths from zymotic diseases included 7 from fever (typhus, enteric or typhoid, and simple continued), 3 from scarlet fever, 2 from diarrhœa, 1 from small-pox, 1 from diphtheria, 1 from whooping-cough, and not one from measles. The annual death-rate from these zymotic diseases did not exceed 2·3 per 1000 in Dublin last week; it was 2·6 in London and 3·6 in Edinburgh. The deaths referred to fever in Dublin, which had been 4 and 12 in the two previous weeks, declined again to 7 last week; the annual death-rate from this cause was, however, nearly six times as high in Dublin as the average rate from fever in the twenty English towns. The fatal cases of scarlet fever were slightly more numerous than those in recent weeks; while those of other zymotic diseases show but slight variations. The deaths of infants were fewer than in any recent week; those of elderly persons, however, considerably exceeded the number returned in any of the four previous weeks.

THE HEALTH OF BERLIN IN 1880.

Berlin is the only European city that, besides London and Paris, can boast of a population exceeding a million. According to the Prussian census, the preliminary report of which has just been published, the population of this city, which was 969,050 on Dec. 1st, 1875, had increased to 1,122,385 at the recent census on 1st Dec. last. This is equal to an increase of not less than 15·8 per cent. in the five years, a rate of increase, however, which was considerably exceeded in several of the other large Prussian towns. The mean population of Berlin during 1880 is calculated at 1,107,100, and from a return recently issued from the City Statistical Bureau, it appears that the birth-rate during 1880 was equal to 39·8, and the death-rate to 29·7 per 1000 of this population. The birth-rate exceeded by 3·7, and the death-rate by so much as 7·5, the respective rates that prevailed during the year in London. This difference between the death-rates of London and Berlin signifies that in equal numbers living there were 134 deaths in Berlin last year to each 100 that occurred in London. Considerably more than 8000 persons died in Berlin during the year who would have survived if the death-rate had not exceeded that which prevailed in London. It is evident that a large proportion of this high rate of mortality is due to excessive infant mortality, which is of a remarkable character. According to the return before us more than 42 per cent. of the total deaths in the city last year were of infants under one year of age, while an additional 17 per cent. were of children aged between one and five years; thus, 59·5 per cent. of the total deaths were of children aged under five years. Berlin infant mortality, that is, the deaths of infants within one year of age, was equal to 314 per 1000 of the births registered. In London infant mortality last year, measured in this manner, did not exceed 158 per 1000. An infant born in Berlin, therefore, appears to have but half the chance of completing its first year of life as an infant born in London. The fatality of zymotic diseases was in the aggregate very large compared with that in London. Only 9 deaths were, however, referred to small-pox, and the fatality of measles and scarlet fever was not excessive. Fever fatality accounts for but a small proportion of the excess; no more than twenty-one deaths from typhus are reported, and the death-rate from enteric fever was scarcely more than twice as high as that which prevailed in London. Diphtheria is endemic in Berlin, as in so many other European and American cities, and caused no fewer than 1198 deaths last year, representing a mortality more than seven times as great as that in London, after due allowance for the difference of population. The main excess of zymotic fatality in Berlin was, however, due to diarrhœal diseases, which caused 5953 deaths in the city during the year, or more than 18 per cent. of the deaths from all causes; these were equal to a death rate of 5·4 per 1000 of the population, while the death-rate from the same causes in London last year did not exceed 1·1 per 1000, although diarrhœa fatality was exceptionally high in England in 1880. The excessive fatality from diarrhœal diseases in Berlin last year began in May and lasted till October. Further particulars of this remarkable diarrhœa fatality, especially the age distribution of the children who succumbed to the disease, would be full of interest in view of the Local Government Board investigation concerning infantile diarrhœa in England, which is now being conducted by Dr. Ballard.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

PORT INSPECTION IN BRITISH INDIA.

The Indian Merchant Shipping Bill, 1881, now under the consideration of the Government of India, provides for the appointment of port inspectors, and among other duties it prescribes that "the inspector may medically examine all or any of the persons on board" the vessels he inspects, and that "he may require and enforce the production of the log, and any other books or documents which he thinks necessary for the purpose of inquiring into the health and medical condition of the persons on board," &c. In the statement of "objects and reasons" attached to the Bill, it is observed of the port inspector that "this officer, in addition to performing the duties at present performed by the health officer (for the performance of which duties he is by the Bill invested with certain legal powers), is entrusted with the duty of inquiring into any legal complaints which may be made on the arrival of a ship in port by any of the crew against the master, or any others of the crew." The port inspector is to be required to perform important medical duties, but it does not appear that he must necessarily be a medical man.

THE PLAGUE.

The latest news of plague from the East announces the appearance of the disease in the city of Maragha, province of Azerbijan, Persia. It is reported that from the date (unstated) of the appearance of plague in Nedjef to 26th March, 1881, 49 cases and 24 deaths had occurred in that city, and 24 deaths from plague in Kufa.

Dr. Vacher has been lecturing at Birkenhead about "health and cleanliness," and he appears to have drawn some forcible lessons from the filthiness of habits of our ancestors in its bearing upon the great epidemics of plague and sweating sickness in the earlier periods of history of the kingdom, and the gaol fever and ship fever of more recent times. Judging from the abstract of the lecture given by the local press, it was too full of interest not to excite a hope that it will be given to the public in a complete form.

A systematic attempt is about to be made to improve the sanitary condition of the lodging houses of Oxford. The keepers of such houses have been informed that an engineer has been appointed to visit their establishments and make a thorough inspection of the premises at the cost of the University. Certificates will be furnished with respect to lodging houses whose sanitary arrangements satisfy the inspector.

THE SERVICES.

THE TRANSVAAL WAR.

Letters from the front have reached us, with some accounts of the medical arrangements of the field hospitals and plans for the relief of the wounded in the actions at Ingogo and Laing's Nek. At the Ingogo fight, which was quite unexpected, and for which therefore no field hospitals or dressing stations were ordered to accompany the column, the troops expecting merely to escort a provision convoy from Newcastle, Surgeon J. McGann, with five stretchers, twenty bearers, and some light equipment, was detailed for duty with the force. Surgeon-Major Babington, the senior medical officer with General Colley's army, immediately that heavy firing was heard in the Ingogo direction, despatched ambulances, ox waggons, a water cart, and stretchers, with a plentiful supply of medical comforts and surgical dressings, to the scene of action under the charge of Surgeons Ring and Landon. The party were, however, stopped by the Boers, who threatened to fire on them if they proceeded, and it was not till 4 o'clock next morning that they were able to reach the battle-field. Dr. McGann took on forty-two severely wounded men, with one officer, Lieutenant Parsons, R.A., to Newcastle, Surgeon Kirwan being despatched from that

place with waggons to bring in the remainder. The wounded were treated in tents and empty buildings; hot soup, beef-tea, brandy, &c., being administered on arrival to all who required them; the wounds were dressed without delay, and several capital operations performed. The medical officers and men of the Army Hospital Corps worked indefatigably to ensure the comfort of the sufferers, many of whom having been exposed on the Ingogo plateau all night, with no shelter but a blanket from the cold wind and ceaseless rain, were in a very depressed and miserable condition. A convoy of wounded from Laing's Nek on February 8th was intercepted by the Boers on their way to Newcastle, the mules and oxen were seized and driven off, and the supplies of blankets and equipment looted. On receipt of this news at Newcastle, the senior medical officer, Dr. Stokes, promptly sent out medical comforts and necessaries by native runners, and at daybreak despatched four teams of mules to bring in the waggons; the party arrived safely in the afternoon of that day. At Newcastle the Base hospital, although filled with wounded from the recent actions, has met all requirements; but to make way for other possible casualties the Principal Medical Officer had ordered a convoy of men fit to travel to proceed to Pietermaritzburg, and so relieve pressure. The camp at Mount Prospect is kept in very good sanitary condition, the water supply is ample and good, procured from a mountain stream, great care being exercised to prevent its pollution by dead oxen or other animals being thrown into it. The camp refuse is burnt daily, the latrines are carefully attended to with dry or fresh earth, and the trenches and pits filled in as soon as they are within a couple of feet of the surface. Up to date of our correspondent's letters the rations had been very good, fresh meat issued daily, with preserved vegetables and lime juice. The rains had been very heavy, and of almost daily occurrence, but in spite of the discomforts of wet tents and clothing the general health of the troops was excellent. Surgeon W. E. Saunders has been appointed secretary to Deputy-Surgeon General Holloway, C.B., the Principal Medical Officer of the Transvaal field force.

GENERAL COLLEY'S DESPATCHES.

In a general order issued at Mount Prospect, Feb. 9th, the late General Colley refers to a medical officer as follows: "The Major-General feels sure the force engaged yesterday will join with him in specially recognising the distinguished conduct of Lieut. Parsons, R.A., and of Surgeon McGann, whose unremitting attention to the wounded under a heavy fire did honour to the branch of the profession to which he belonged."

The following officers of the Bombay Medical Service have been selected for promotion to the new rank of Brigade Surgeon:—Surgeon-Majors Bruce, Cook, Pinkerton, Joynt, Cruikshank, Colston, Carter, Langley, Blanc, and Dymock. The last officer will be supernumerary to the establishment for Bombay, which has been fixed at nine.

Surgeon-Major W. H. Bean, M.D., Madras Medical Service, has been promoted to the rank of Deputy Surgeon-General from the 28th March, vice Deputy Surgeon-General J. Wilson, retired.

Surgeon-Major Knaggs has been appointed to the medical charge of the Hill Station of Chaubutia, Bengal.

Surgeon-Major J. A. Anderson has embarked at Jamaica in medical charge of the 2nd West India Regiment, ordered to the Gold Coast for service in view of an Ashantee disturbance.

ADMIRALTY.—Staff-Surgeon Charles John Fennell has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of March 31st, 1881.

UNIVERSITY COLLEGE HOSPITAL.—The annual meeting of the friends of this hospital was held on the 2nd inst. under the presidency of the treasurer, Mr. Prevost. The total receipts for the past year had been £28,637, against £21,344 in 1879; the expenditure for 1880 was £28,024. The complete set of medicinal baths had been found of great use, not only to the patients of the hospital, but to those of private practitioners, for whom to a limited extent they were available on payment of fees. The dinner this year, it was announced, would be held at Willis's Rooms in May, and would be presided over by Prince Leopold.

THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION.

THE applications for space already received leave no room to doubt that the forthcoming exhibition will be one of great importance, interest, and magnitude. Almost exactly a quarter of a mile of frontage has been applied for by some of the leading British and foreign instrument makers, pharmacists, opticians, and makers of sanitary apparatus. The committee have, nevertheless, deemed it advisable to extend the time for receiving applications from Great Britain and the Continent till the 16th of this month, the date which had been already named for the final reception of applications from America and the Colonies. Medical and sanitary literature will form an important feature in the show, and more than one of the leading medical publishers has applied for a considerable frontage. Diagrams and specimens of atlases will be hung upon the walls, and these, as well as the books, cannot but prove of interest to our foreign guests, many of whom are engaged in the business of imparting to students a systematic knowledge of their profession. Many applications have been received from individual members of the profession who wish to exhibit instruments, apparatus, statistical diagrams, &c. The fee for exhibiting a single article is almost nominal, and carries, we believe, with it a season ticket for the exhibition. These "single articles" will be an attractive feature, and we trust that members of the profession will make every use of this opportunity of imparting the results of their inventive faculties to their brethren. Another important element will be an attempt to represent visually the leading features of some of the health resorts of Great Britain and the Continent. Maps, plans, bird's-eye views, and tabulated statements of the leading features of health resorts (such as aspect, height above sea-level, nature of soil, population, means of sewerage and water-supply, special features, such as mineral springs or baths, arrangements for the accommodation and amusement of guests, &c.) will be displayed upon the walls, and we understand that one of our leading railway companies is taking steps to represent in this manner the health resorts to which it gives access. One of the difficulties which the committee foresaw in organising an exhibition like the present was the repression of the popular—not to say "quack"—element, and the mere advertiser. This difficulty has not yet arisen, for, with scarcely an exception, the applications for space have come from old established firms of acknowledged respectability, and the necessity for refusing space, on the grounds of the trivial or unsuitable nature of the proposed "exhibit," will probably be very small. The extension of time for making applications will certainly be appreciated. It will definitely come to an end, however, this day week (Saturday the 16th), so that those who have not yet secured their space must make application to the secretary, Parkes Museum, University College, without delay.

THE NAVAL MEDICAL SERVICE.

THE *London Gazette* of Tuesday, April 5th, 1881, contains the following:—At the Court at Windsor, the 1st day of April, 1881. Present, the Queen's Most Excellent Majesty in Council.

Whereas there was this day read at the Board a Memorial from the Right Honourable the Lords Commissioners of the Admiralty, dated the 30th of March, 1881, in the words following, viz.:—

"Whereas we have had under our consideration the Regulations governing the position of Medical Officers of your Majesty's Navy, and whereas we are of opinion that it is desirable to effect certain modifications and improvements therein with a view of placing such officers in the position we consider it advisable should be granted to them, we would humbly submit for your Majesty's approval the following regulations for the remuneration, position, advancement, and retirement of the aforesaid officers, and we would submit that such regulations should take effect

from 1st April, 1881, and be applicable only to officers on the Active List of the Royal Navy at that date, except that as regards surgeons entered since 1st January, 1881, we would submit such regulations be in force from the date of entry.

"*Numbers.*—1. The Active List of Medical Officers not to exceed—Inspectors and Deputy Inspectors-General of Hospitals and Fleets, 16 (of whom not more than four to be Inspectors-General), Fleet Surgeons, Staff Surgeons, and Surgeons, 400.

"*Promotion.*—2. An Inspector-General of Hospitals and Fleets to be selected from amongst deputy inspectors-general who have in that rank three years' foreign service; or four years' mixed service, of which not less than two to be abroad; or five years' home service in such appointments as preclude foreign service, and provided that they have not refused to go abroad if called upon.

"3. A Deputy Inspector-General of Hospitals and Fleets to be selected for ability and merit from amongst fleet surgeons.

"4. (*a*) The rank of Fleet Surgeon to be granted to Staff Surgeons on completion of twenty years' full-pay service, if recommended for advancement by the Medical Director-General, subject to our approval. (*b*) Power to be given to us to make, at our discretion, special promotions from the rank of Staff Surgeon to that of Fleet Surgeon in cases of distinguished service or conspicuous professional merit, such promotions to be exceptional, and not to exceed the rate of one in any two years. The total number at any one time of Fleet Surgeons holding that rank by such special promotions not to exceed six. (*c*) Officers who have been specially promoted to the rank of Staff Surgeon for distinguished service or conspicuous professional merit, to be eligible for promotion, if recommended by the Medical Director-General, to the rank of Fleet Surgeon after eight years' full-pay service as Staff Surgeon.

"5. (*a*) Rank as Staff Surgeon to be granted, subject to our approval, to surgeons at the expiration of twelve years from the date of entry, provided they are recommended by the Medical Director-General, and have passed such examination as may be required after completion of eight years from date of entry in the rank of Surgeon. (*b*) Power to be given to us to make, at our discretion, special promotions to the rank of Staff Surgeon, in cases of distinguished service, or conspicuous professional merit, such advancements to be exceptional, and not to exceed the rate of one a year. No officer to be so promoted unless he passes the examination prescribed for other Surgeons, but in such a case the requirement of eight years' service to be dispensed with. The total number at any one time of Staff Surgeons holding that rank by such special promotions not to exceed eight.

"*Relative Rank.*—6. Existing regulations to remain in force with the following exception—viz.: In all matters wherein the Army and Army Administration are concerned, Fleet Surgeons to rank with and as Brigade Surgeons.

"*Full Pay and Allowances.*—7. The undermentioned scale of full pay to be substituted for that now in force:—

Rank.	Daily. £ s. d.	Yearly. £ s. d.
Surgeon—		
On entry	0 11 6	209 17 6
After 4 years' full-pay service	0 13 6	246 7 6
,, 8 ,, ,,	0 15 6	282 17 6
Staff Surgeon—		
On promotion	1 1 0	383 5 0
After 4 years' full-pay service in rank	1 4 0	438 0 0
Fleet Surgeon—		
On promotion	1 7 0	492 15 0
After 4 years' full-pay service in rank	1 10 0	547 10 0
,, 8 ,, ,,	1 13 0	602 5 0
Deputy Inspector-General	2 2 0	766 10 0
Inspector-General	2 15 0	1003 15 0

"8. The allowance of 5*s.* a day in addition to full-pay at present granted to the Fleet Surgeon of a flagship bearing the flag of a Commander-in-Chief on a foreign station to be given to the senior medical officer of such ship, whether a fleet or staff surgeon, and an allowance of 2*s.* 6*d.* a day to the senior medical officer (being a fleet or staff surgeon) of the ship of a commodore or of a senior officer commanding a foreign station. Allowances to be granted as follows to officers giving the course of instruction to surgeons on first appointment to the Naval Service:—To a medical officer of Haslar Hospital, conducting the course, £150 a year. To a junior medical officer of the same hospital, assisting him, £50 a year. No other alterations to be made in the allowances of medical officers.

"*Half-pay.*—9. The undermentioned scale of half-pay to be substituted for that now in force.

Rank.	Daily. £ s. d.	Yearly. £ s. d.
Surgeon—		
Under 2 years' full-pay service	0 6 0	109 10 0
After 2 ,, ,,	0 7 0	127 15 0
,, 4 ,, ,,	0 8 0	146 0 0
,, 6 ,, ,,	0 9 0	164 5 0
,, 8 ,, ,,	0 10 0	182 10 0
,, 10 ,, ,,	0 11 0	200 15 0
Staff Surgeon—		
On promotion	0 12 0	219 0 0
After 2 years' full-pay service in rank	0 13 0	237 5 0
,, 4 ,, ,,	0 14 0	255 10 0
,, 6 ,, ,,	0 15 0	273 15 0
Fleet Surgeon—		
On promotion	0 17 0	310 5 0
After 2 years' full-pay service in rank	0 18 0	328 10 0
,, 4 ,, ,,	0 19 0	346 15 0
,, 6 ,, ,,	1 0 0	365 0 0
Deputy Inspector-General—		
On promotion	1 5 0	456 5 0
After 2 years' full-pay service in rank	1 7 0	492 15 0
,, 4 ,, ,,	1 9 0	529 5 0
Inspector-General	1 13 0	693 10 0

"*Retirement.*—10. Compulsory retirement to be as follows:—

Inspector and Deputy Inspector-General of Hospitals and Fleets	At the age of 60, or at any age if he has not served for 5 years	To be retired irrespective of age if found physically unfit for service.
Fleet Surgeon, Staff Surgeon, and Surgeon	At the age of 55, or at any age if he has not served for 5 years.	

"11. Voluntary retirement and withdrawal to be allowed as follows:—(*a*) Every officer to have the option, subject to our approval, of retiring after twenty years' full-pay service on the scale of retired pay, provided in paragraph 12, or on the scale of gratuities provided in that paragraph, if he is not eligible for retired pay. (*b*) At the expiration of eight, twelve, or sixteen years' full-pay service every officer to be permitted, subject to our approval, to withdraw from the Naval Service, receiving a gratuity on the scale laid down in paragraph 12. The name of an officer so withdrawing will be removed from the lists of the Navy, with which all connexion will then be severed. (*c*) Voluntary retirement and withdrawal to be allowed, as a rule, only when an officer is unemployed or serving at home.

"12. Gratuities and retired pay on the undermentioned scale to be granted on retirement and withdrawal:—

	Gratuities. £ s. d.	Daily. £ s. d.	Yearly. £ s. d.
Surgeons and Staff-Surgeons—			
After 8 years' full-pay service ..	1000 0 0 ..	..	..
,, 12 ,, ,, ,, ..	1500 0 0 ..	..	..
,, 16 ,, ,, ,, ..	2250 0 0 ..	..	..
Fleet Surgeons—			
After 20 years' service	..	*1 0 0 ..	365 0 0
,, 24 ,, ,, ...	..	*1 2 6 ..	410 12 6
,, 27 ,, ,, ...	..	*1 5 0 ..	456 5 0
,, 30 ,, ,, ...	..	†1 10 0 ..	547 10 0
Deputy Inspector-General	..	1 15 0 ..	638 15 0
Inspector-General	..	2 0 0 ..	730 0 0

* To obtain this rate an officer must hold the Commission of Fleet Surgeon.

† Or on compulsory retirement at the age of fifty-five.

"13. An officer retired with less than twenty years' service, on account of disability contracted in, and attributable to the service, to receive the half-pay of his rank, or with our consent, a gratuity on the scales given in paragraphs 12 and 14 (*b*).

"14. An officer retired with less than twenty years' service, on account of disability contracted in, but not attributable to the service, to receive—(*a*) If he has over eight years' full-pay service, either a gratuity on the scale given in paragraph 12, or half-pay, according as we think fit. (*b*) If he has less than eight years' full-pay service, such gratuity as we may think fit, not to exceed the rate of £125 for each year of full-pay service.

"15. Under circumstances other than those specified in paragraphs 13 and 14, an officer retired with less than twenty years' service to receive a gratuity, on the scale laid down in paragraph 12, if he has eight years' full-pay service, and on that provided in paragraph 14 (*b*) should his full-pay service not amount to eight years. Half-pay or retired pay not to be allowed,—except that every officer on the Active List on 1st January, 1881, if compulsorily retired, shall be allowed, at his option, to receive half-pay, but subject to the provisions

of Orders in Council for reduction of half-pay and retired pay.

"16. The power vested in us of granting reduced rates of half-pay and retired pay in cases of misconduct, to be extended to the award of gratuities on retirement, and the gratuity awarded in such case to be reduced to such amount as we think fit.

"17. An Officer retiring after 20 years' full-pay service to be eligible if recommended by the Medical Director-General for special reasons on account of distinguished or meritorious service, for a step of honorary rank, such step to be awarded at our discretion, and not to confer any claim to increase of retired pay or widow's pension.

"18. All retired Officers to be liable till the age of fifty-five, to be called upon to serve in time of declared national emergency in a rank not lower than that held on retirement. This liability not to exist in cases of withdrawal on the conditions specified in paragraph 11 (*b*).

"*Definition of Service.*—19. Service to reckon as follows:—(*a*) When borne on the books of any of your Majesty's ships or vessels, or when employed in Naval Hospitals or other Civil establishments at or under the Admiralty to be full-pay service for all purposes, but subject to the provisions in paragraph 2 as regards promotion. (*b*) Service under any other department which may be declared by us, with the consent of the Lords Commissioners of your Majesty's Treasury, to be for this purpose Naval Service, and Service on Commissions or Committees on Naval matters of importance to be full-pay service for such purposes, and to the extent to which it has hitherto reckoned as service under the provisions of Art. 216 of the Regulations of 1879, and those of Orders in Council of 22nd February, 1870, 16th May, 1870. (*c*) Time on half-pay to count as one-third service for increase of retired pay, but not for any other purpose.

"*Widows' Pensions.*—20. Where an officer retires or withdraws on a gratuity, his widow and children to have no claim to pension or compassionate allowance. 21. The undermentioned articles of the regulations and provisions of Orders in Council to be cancelled except as regards officers retired before 1st April, 1881. Queen's regulations and Admiralty instructions 1879. Articles 215 as regards medical officers; 219 the whole; 241 paragraphs *a* to *d* inclusive. 265, the whole. Appendices XX. and XXIII., as far as relates to full-pay and half-pay of medical officers. Order in Council 22nd February, 1870. Section V. the whole. Section VIII. the whole as far as relates to medical officers. Section IX. the whole as far as relates to medical officers. Section X. the scale of retired pay, and paragraphs 2 and 3, as far as medical officers are concerned. Section XII. as regards medical officers. Order in Council 4th February, 1875, the whole. We would represent to your Majesty that the Lords Commissioners of your Majesty's Treasury have assented to the above proposals."

Her Majesty having taken the said Memorial into consideration, was pleased, by and with the advice of Her Privy Council, to approve of what is therein proposed. And the Right Honourable the Lords Commissioners of the Admiralty are to give the necessary directions herein accordingly.

C. L. PEEL.

NOTIFICATION OF INFECTIOUS DISEASES BILL (IRELAND).

To the Honourable the Knights, Burgesses, and Commons in Parliament assembled.

THE petition of the President and Council of the Irish Medical Association humbly sheweth:

That your petitioners are the executive of an association devoted to representing the opinions and interests of the medical profession in Ireland, and includes amongst its members a large proportion of the legally qualified medical men in practice in Ireland. That your petitioners have fully considered the notification of Infectious Diseases (Ireland) Bill now standing for a second reading in your honourable House, and have obtained the opinion of a large majority of the medical practitioners of the City of Dublin upon the chief proposals contained in said Bill, which opinion has been expressed by a majority of nearly two to one against any proposal which would require the medical attendant to notify in writing the occurrence of infective disease either to the sanitary authority or to the house occupier.

Your petitioners confirm the opinion thus expressed, and consider that the provisions of said Bill are not calculated to effect with certainty the discovery of infective disease in those instances in which concealment is most probable, while they will, if passed into law, impose upon the medical profession new functions inconsistent with the efficient performance of their duties towards their patients, and seriously prejudicial to their interests as practitioners.

That your petitioners apprehend that if, as would occur under the operation of said Bill, the visit of the physician be followed by the immediate enforcement of sanitary precautions, a great inducement will be created, in all instances in which it is desired by the house occupier to avoid the application of the sanitary law, to omit sending for a medical attendant, or to defer doing so until the disease had reached a stage in which its treatment would be difficult and ineffective. Your petitioners, therefore, anticipate that the number of undetected cases of infective disease might rather increase than diminish under the operation of the proposed law, while in many instances the chances of restoration of the patient to health would be greatly prejudiced.

Your petitioners humbly submit that the professional and monetary relations existing in Ireland between the physician and his patient are altogether different from those which exist in other divisions of the kingdom, and furthermore, that the methods of application of sanitary law in Ireland are not fairly comparable with those which exist elsewhere; and your petitioners therefore submit that a system of notification of infective disease applicable to England and Scotland may prove altogether unsuitable to Ireland, and they are of opinion that any enactment which requires the medical attendant in Ireland to give a written certificate of the disease from which his patient is suffering will be inoperative in many instances, and will tend to increase the evil which it purports to remedy.

Your petitioners are furthermore strongly of opinion that in respect of the fee proposed to be paid for such notification, the penalty imposed for omission to notify, and in other details, the said Bill is altogether objectionable.

Your petitioners, therefore, humbly pray that your honourable House will not pass said Bill.

(Signed) J. CHAPMAN, President.
R. BROWNE, Hon. Sec. of Council.

ABERDEEN UNIVERSITY.

THE winter session at Aberdeen concluded on Friday last, when Lord Rosebery, Rector of the University, attended and presided at the ceremony of graduation in Arts, and addressed the graduates in felicitous terms. His Lordship on this occasion was accompanied by the Countess, and there was a large attendance of the general public and much enthusiasm displayed by the undergraduates. In concluding the winter session in the medical school Professor Struthers referred to the change in the order of the examinations just effected by an order of the Queen in Council, approving of certain alterations on the Ordinance of the Scottish Universities Commissioners regulating graduation in Medicine in the University. The examinations in Botany and Natural History would now take place at the end of the summer session preceding the second winter session, instead of at the more advanced period of the curriculum, which had been found to interfere with the more strictly professional work. The examination in Materia Medica would now take place at the end of the third, instead of prematurely at the end of the second year, when the student could hardly be expected to understand therapeutics.

Dr. Struthers warmly congratulated the students on the better direction which these changes would give to their medical studies. A change is also made on the relation of the examinations in Anatomy. Instead of the examination in Elementary Anatomy at the end of the second year, and in Advanced Anatomy at the end of the third year, the terms to be used in future would be Anatomy, and Regional Anatomy, which would give a better direction to both the earlier and later parts of anatomical study.

Dr. Struthers referred also to the propriety of obtaining a larger number of bursaries and scholarships for the medical

side of the University, which is but scantily provided with these rewards, while in the Faculty of Arts there are 240 bursaries and various well endowed scholarships. The students of medicine in Aberdeen had now grown to be a large body, no less industrious and no less deserving than the students in the sister Faculty, and he saw no reason why scholarships and large rewards should be attached to the study of Latin and Greek and not to such studies as Chemistry, Anatomy, or Physiology. He trusted that intending benefactors of the University would keep in mind where there is plenty and where there is need.

MEDICAL NOTES IN PARLIAMENT.

Means of Exit from Theatres.

IN the House of Lords on Tuesday, Lord Kenmare, replying to an inquiry by the Duke of St. Albans, said that the theatres had better means of exit than any other public buildings in the metropolis. In that respect they had been improving, and the improvements were being continued. He would lay on the table a return relating to this subject.

In the House of Commons on Thursday, 31st ult., a petition was presented from Charles Colsten for inquiry into the East India Army Medical Department. The Alkali Works Bill was read a second time. Mr. Warton gave notice that on Friday, April 8th, on going into Supply, he would move a resolution in favour of suppressing trade combinations, which had for their object the undue increase of the price of food. Mr. Errington and Mr. Dillwyn put down amendments for committee on the Alkali Bill.

On Friday, Sir Herbert Maxwell brought forward his resolution against the importation of spurious butter, which was opposed by the Government on the ground that the compounds imported under the name of butter were not hurtful. The chief feature of the debate was a remarkable speech by Dr. Lyon Playfair in support of the position taken by the Board of Trade. The resolution was rejected by the narrow majority of 14—75 to 59. Sir J. M'Garel Hogg, Chairman of the Metropolitan Board of Works, gave notice that in Committee on the Alkali Bill he would move a clause to exclude any works within the metropolis from the operation of the Bill. Mr. Cochrane Patrick gave notice that in Committee of Supply he will move to reduce the English medical relief grant by £20,000, doubtless with the object of renewing the Scotch demand for an increased medical grant in that country.

On Monday, a petition was presented from Fife and Clackmannan for extension to Scotland of the system of coroners' inquests.

On Tuesday, a return was presented of the number of examinations held in London for appointments to the Army Medical Service. Mr. Chamberlain, in reply to a question by Mr. Dixon Hartland, as to a recent seizure of 200 putrid American hams in the Central Meat Market, said he believed the ordinary law was sufficient to meet such cases. He saw no necessity for asking the American authorities to prohibit similar exportations, believing that the influence of the consignee upon the consigner would be more efficacious.

On Wednesday, Mr. Litton's Lunacy Law Assimilation (Ireland) Bill was read a second time, and committed for Wednesday, 1st June. Sir Hervey Bruce will move that the Bill be referred to a Select Committee; and Mr. Warton has put down a notice that he will move the rejection of the Bill. Mr. Dillwyn gave notice that in Supply he will move to reduce the vote for Broadmoor by £500.

Small-pox.

On Thursday, Mr. Dodson, in reply to Sir S. Waterlow, said his attention had been for some time anxiously directed to the prevalence of small-pox within the metropolis. The Government had no power to make special arrangements for the care of patients suffering from that disease; but the Local Government Board had not refrained from impressing upon the several authorities who were liable to provide accommodation for small-pox patients, whether they belonged to the pauper or non-pauper class, the necessity of making every arrangement in their power; and he was glad to say that arrangements were being made to supplement the hospital accommodation.

Glanders.

Mr. Mundella, in reply to Lord C. Hamilton, said there had no doubt been an increase in the number of cases reported of horses with glanders in 1880 as compared with the number in 1879, but it was believed that that was due to the more rigid enforcement in the latter year of the Act of 1878, and not to the greater prevalence of the infection. It was a fact that drinking troughs were one source of spreading the infection; and it was also true that horses infected were for the most part worked during the night hours, probably on account of the facility the darkness afforded of avoiding detection, but it must be remembered that when they were detected the penalties were more severe.

THE CHLOROTIC MURMUR.

To the Editor of THE LANCET.

SIR,—I have no fault to find with Dr. Bramwell's quotation; it is quite correct, but by no means warrants his conclusion. I still maintain that "the so-called basic murmur of chlorosis is never arterial." That, however, is not quite the same as "*denying* that the inorganic murmurs of chlorosis are *ever* arterial." In my sixth chapter, first edition, I am occupied solely in discussing the *primary* murmur of chlorosis, and having given it as my belief that *this primary* murmur is "*never arterial*," but always strictly cardiac in character, being produced by regurgitation through the mitral valve, due to dilatation of the heart, I hold that, both logically and pathologically, I left it to be inferred that the *ultimate result* must be a systolic arterial murmur. When Dr. Bramwell, therefore, states that I deny that such a murmur can ever occur, this only shows that he has completely misunderstood me. In a subject of so much importance I think he was bound to use the utmost care not to misinterpret my views, if they were worth quoting at all; and I also think that I do not ask too much of a *teacher* of medicine, that besides the usual text-books he should also be acquainted with at least so much of the literature of the subject he is writing about as is to be found during the last five years in the pages of the journal he writes in.

Hayden and Fothergill are anew imported into the controversy, but as the opinions they have expressed are quite beside the mark, I do not require to enter the lists against them. I have said that the separation between the systolic and the diastolic closure of the segments of the pulmonary valve, caused by the increase of the arterial blood-pressure within the pulmonary circuit, supplies what seems to me to be the only rational explanation of a reduplicated second, having due regard to all the facts of the case. Dr. Bramwell asserts that this explanation cannot be accepted because some professor of physiology, whose name he does not give, Dr. Fothergill, and he himself, regard this systolic closure as soundless. Ceradini has, however, stated it as a matter of fact, that the systolic closure of the arterial valves is attended by an audible snap; it is with him, therefore, and not with me, that this part of the controversy must be settled. I am, Sir, yours obediently,

Edinburgh, March 28th, 1881. GEORGE W. BALFOUR.

REMARKABLE CASE OF EARLY MATERNITY.

To the Editor of THE LANCET.

SIR,—On August 8th, 1871, I attended Mrs. F. M——, a joiner's wife, during confinement, and delivered her of a female child. There was nothing remarkable about the infant until it was twelve months old, when it commenced to menstruate, not very regularly at first, varying from one month to six weeks between the periods; the last two years the catamenia have been very regular indeed, never more than three weeks elapsing between the periods. They ceased on June 22nd, 1880 (her mother's statement), when she became pregnant. There is nothing very remarkable in appearance about the child. The hirsute growth over the pubes and in the axilla is profuse, the breasts are large, and at present gorged with milk. She is a very active, hard-working girl, and has for the last year done all her mother's washing; in fact, the night before she was confined I saw her myself hanging the day's washing on the clothes-line in her father's garden. Her labour pains did not con-

tinue over six hours from first to last. I administered chloroform, and kept the body well supported with bandages during labour.

The child was a large one, and weighed 7 lb. It has since died in convulsions; its left foot had only three toes on it. This young mother is now nine years and eight months old, and must have been pregnant two months before she reached the age of nine. Yours obediently,

HENRY DODD, M.R.C.S., &c.

Rillington, York, March 24th, 1881.

GLASGOW.

(From our own Correspondent.)

THE Faculty of Physicians and Surgeons of Glasgow has had under consideration a proposal to institute an examination for the higher of the two qualifications, both registrable, which it grants. This proposal was rejected at a recent meeting, mainly by the vote of the older and more conservative Fellows. The grounds on which the suggested change was advocated were that at present there is no high qualification in surgery obtainable in Scotland, that it is illogical that the Faculty should demand an examination for its lowest diploma, and yet grant its higher one by ballot and purchase, and that it would be better to retire gracefully from its present position now than to be forced from it a short time hence under pressure from without. The principal argument urged in favour of the existing arrangement was the statement that candidates for the Fellowship must not only pay £50 and risk a ballot, but must also already be in possession of a registrable qualification, examination being thus rendered unnecessary. This question, it is believed by those who profess to be able to discern the signs of the times, is one which will again force itself on the attention at no very distant date.

The following appointments have been made by the Glasgow University Court:—Dr. H. C. Cameron of Glasgow to be examiner for the next four years in Surgery and Clinical Surgery; Dr. D. Fraser of Paisley, to be examiner for the same period in Medicine and Clinical Medicine; Dr. A. Macalister, of Trinity College, Dublin, to be examiner for the same period in Physiology and Pathology.

Dr. A. Wallace has been appointed to the chair of Midwifery in Anderson's College, rendered vacant by the death of Dr. J. G. Wilson. Dr. S. Sloan stood second in the estimation of the Trustees, Dr. W. L. Reid third.

At the meeting which closed the winter medical session at Anderson's College, a few days ago, the Chairman referred to the wonderful prosperity of the College during the past few years, and read some statistics which, as they are the only trustworthy evidence on this point which has hitherto been obtainable, are worth quoting. The number of students attending the medical classes of the college in the session 1877–78 was 70; in 1878–79, 86; in 1879–80, 91; in 1880–81, 110. These are large numbers for an extra-mural school, and they indicate a high and well-deserved degree of prosperity. All that is now wanting to complete information is that the other extra-mural schools should publish similar statistics.

PARIS.

(From our own Correspondent.)

THE report of the Commission appointed by the Academy of Medicine to study the question of compulsory vaccination was read by M. Blot, in the name of his colleagues, on the 29th of March. M. Blot began by stating that it is unnecessary to bring forward any further proof of the value of vaccination—the events of 1870–71 have amply demonstrated this point. The only objection to the practice of any importance is the danger of inoculating syphilis with vaccinia; but even this eventuality, which science has reduced to a minimum, is rendered impossible by the use of animal vaccine. It has been said that compulsory vaccination is an infringement of the liberty of the subject; but M. Blot considered that this liberty ends where common interests begin. The privilege of disseminating disease is certainly contrary to the public welfare, and inasmuch as all other hygienic measures—such as isolation, disinfection, &c.—have proved insufficient to prevent the spread of small-pox the Government is justified in imposing such prophylactic means as have remedied the evil in other countries. The conclusions of the report, which have been adopted by eleven out of the twelve members forming the Commission, are as follows:—

"Considering that vaccination is, with rare exceptions, an inoffensive operation, when performed with care upon healthy subjects; and that, without vaccine, other hygienic measures, such as isolation and disinfection, are in themselves insufficient to prevent small-pox; that the belief in the danger of vaccination and revaccination during epidemics is unfounded; and that, lastly, revaccination, the necessary complement of vaccination, should be practised at least within ten years after a successful vaccination, and repeated as often as possible, when not followed by characteristic cicatrices—on these grounds the Academy is of opinion that there is urgent need in the public interest of a law rendering vaccination compulsory. As regards revaccination, it should be encouraged in every way, and required by public services (*réglements d'administration*) as far as it is within their power."

The twelfth member of the Commission, M. Depaul, states that he is perfectly agreed with his colleagues on all the questions which are dealt with in the report, and that he is prepared to vote for all the ideas there expressed, except the conclusion rendering vaccination compulsory. According to him the rights of a father of a family are paramount over those of the State, and the father, or mother, or the natural guardian of a child should be free to vaccinate it or not, as he may have confidence or not in the utility of the practice. Not only, says M. Depaul, is compulsory vaccination vexatious, it is also inapplicable. Those who have taken the trouble to inquire into the matter know that in England and Germany the law on the subject remains a dead letter. It exists, but it is not enforced. Everything should be done to encourage vaccination and revaccination, but there should be no obligation. What is required is money. Hitherto the Government has done almost nothing, the sum expended on vaccination in the whole of France only amounting to 240,000 francs (less than £10,000), which represents five francs per thousand of the population, and from three to four centimes (one-third of a penny) for each vaccination. With a proper expenditure an efficient service might be organised, a number of vaccinating centres created, and human lymph supplemented by an animal supply. Lastly, it would be as well to pay an adequate fee for the operation, to those who perform it, instead of, as is now the fashion, praising the zeal and devotion of the country practitioner, but leaving his labour unrewarded. The adjourned discussion, which took place yesterday afternoon, brought forward MM. Fauvel and Jules Guérin, the former in favour of the views of the Commission, and the latter naturally against them. Not that M. Guérin is an opponent of vaccination; on the contrary, he declares it excellent, and uses all his endeavours to promote it. But the practice being looked upon as dangerous by some, he considers that a compulsory law would weigh on their consciences in obliging them to further an operation of which they disapprove. Under these circumstances the Academy cannot refuse to take such objections into account, and must not, he thinks, risk its scientific prestige by pronouncing in favour of compulsion.

Paris, April 5th, 1881.

THE LEVÉE. — The following members of the medical profession were presented at the Levée held on Tuesday at St. James's Palace by the Prince of Wales:—Surgeon-General A. Shatton; Surgeon-Majors Allen, J. Candy, M.D., and H. F. L. Melladew; Surgeons C. J. Addison, W. J. Baker, W. G. A. Bedford, H. J. Barnes, A. P. Hart, F. A. Harris, C. B. Lewis, E. L. Maunsell, J. H. Nicholas, H. S. Parker, R. Porter, D. L. Porter, T. H. Parke, W. W. Pope, W. F. Spencer, M.D., W. C. Wise, M.D., and C. L. Young; Dr. Halford, of Melbourne; and Fleet Surgeon C. Strickland.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The prizes at the termination of the winter session in the Medical School have been awarded to the following:—First year: first prize, gold medal and £10, Michael T. Yarr; second prize, £10, W. D. Waterhouse. Second year: first prize, £12, Austin M. Cowper; second prize, £8, Myer M. Dutch. Third year: first prize, £10, Whitby B. Stokes; second prize, £5, Langford Simms; third prize, £2, G. W. Elsner.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

J. N. Kaye, Edgar Beaumont, and Herbert Child, Leeds School of Medicine; Rudolph J. Maas, McGill College, Canada; John Kæser, Basle, Switzerland; Bryce Gordon, Medical College, Bombay; Henry G. Beyer, New York and Leipzig; James Limont, Edinburgh; David C. M. Lunt, Frederick W. Bennett, Lewis Brown, Gilbert L. Barrett, William A. Evans, Robert Jennings, John H. Jones, Harry F. Wylde, Ernest S. Reynolds, John Stevenson, and William E. Wilson, Owens College, Manchester; John H. Potter, Sheffield; Robert S. Coulthard; Edgar H. Hughes, Harold Simmons, and William C. Lysaght, Bristol; Arthur Overton, William O. Travis, and Arthur W. Davison, Liverpool; Isaac Hartley and Arthur Hepworth, Newcastle-on-Tyne; Charles J. Evers, Birmingham; Leonard H. Armstrong, Cambridge; Robert H. Peck and Robert H. Martin, University College; Frederick W. Hatchett and Ambrose E. L. Charpentier, St. Thomas's Hospital; Percy H. Mander and Charles B. Waller, Westminster Hospital; George Thomas and William J. Black, Owens College, Manchester; James T. Lilburne, Cambridge; Joseph A. Hutchinson, Newcastle-on-Tyne; Herbert J. Robson, Leeds; Howard A. Bredin, Liverpool; Hugh C. Thurston, Bristol; John W. Bentley, Owens College, Manchester; Francis J. C. Mason, St. Bartholomew's Hospital; George W. Hill, St. Mary's Hospital; William C. Parsons, London Hospital; Thomas Greaves, New York and King's College, London; Arthur W. Ogle, Middlesex Hospital; Walter B. Platt, Berlin and Vienna.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 31st:—

Locke, George, Aylesbury.
Morris, Gerald de Courcy, M.D. New York, Albany-street.

The following gentlemen also on the same day passed the Primary Professional Examination:—

William Edward Dawson, London Hospital; Arthur Lumley Tireman, Guy's Hospital.

MR. WILLIAM SOPER has resigned his post as member of the Stockwell Hospital Committee.

DR. A. B. GARROD, F.R.S., and DR. J. L. SULLIVAN have been elected Members of the Royal Institution.

THE Governors of the Royal Berkshire Hospital have decided to expend £16,000 in altering and enlarging the building.

MR. GEORGE P. DALE, F.R.C.S. Eng., of Falconer House, Scarborough, has been placed on the Commission of the Peace for the North Riding of Yorkshire.

MR. ALBERT NAPPER, late of Cranleigh, so well known in connexion with the establishment of cottage hospitals, has received, on the occasion of his leaving the town, a gratifying proof, in the shape of a purse of £242, of the esteem in which he is held by his friends and neighbours.

A SUM of £120,000 is to be raised on mortgage of the county rates for the purpose of erecting additional buildings, capable of containing 1000 patients, at the Rainhill Lunatic Asylum, Lancashire.

MR. CHARLES BROOK, Surgeon to the Lincoln County Hospital, has made a donation of £50 to its funds, "in token of his appreciation of the great excellence of the nursing in that institution at the present time."

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest*

ATKINSON, F. H., L.F.P.S.G., has been reappointed Medical Officer for the Bennington and New Leake Districts of the Boston Union.

BARRY, E. F. S., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Visiting Physician to Kanturk Union Workhouse, vice O'Shaughnessy.

BATHE, A. J., M.R.C.S.E., L.R.C.P.I., L.S.A.L., has been appointed Assistant Medical Officer to the Greenwich Union Infirmary, vice C. H. Hartt, resigned.

CHESHIRE, H. F., F.C.S., has been appointed Public Analyst for the Borough of Hastings, vice Ashenden, resigned.

COOMBS, S. W., F.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer of Health to the Claines Local Board, Worcester.

CRITCHETT, G. Anderson, M.A., M.R.C.S.E., has been appointed Ophthalmic Surgeon to St. Mary's Hospital, vice Wharton Jones, resigned.

DINWOODIE, W., M.D., M.Ch., has been appointed Medical Officer for the Elsdon District of the Rothbury Union.

FENN, E. L., M.D., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer for In-patients of the Richmond Hospital, vice Dunn, resigned.

FOX, T. C., M.B., M.R.C.S.E., has been appointed Physician to the Skin Department of the North-West London Free Dispensary for Sick Children, Edgware-road.

GIBBES, H., M.B., L.R.C.P.I., has been appointed Curator to the Anatomical Museum, King's College.

GREASLEY, C., L.F.G.S., has been appointed Medical Officer for the Yoxall District of the Lichfield Union.

HARTT, C. H., L.R.C.S.I., L.K.Q.C.P.I., & L.M., late Assistant Medical Officer to the Greenwich Union Infirmary, has been appointed Medical Officer to the Central District of Greenwich.

HAWKINS, H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Ware Union.

HEPBURN, A., M.R.C.S.E., M.S.A.L., L.S.A.L., has been appointed House-Surgeon and Secretary to the Chelsea, Brompton, and Belgrave Dispensary, vice A. Buchanan, M.D., resigned.

KIRBY, T. C., L.K.Q.C.P.I. &c., has been appointed Consulting Physician to the North-West London Free Dispensary for Sick Children, Edgware-road.

MALL, H. C., M.B., C.M., has been appointed Assistant House-Surgeon to Leith Hospital.

MATURIN, L., L.K.Q.C.P.I., has been appointed Temporary Superintendent of the Kilmainham Fever Hospital, Dublin.

SHAW, C. K., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer of Health for the Hastings Urban Sanitary District, vice Ashenden, resigned.

STUART, S., M.D., L.R.C.S.Ed., has been appointed Assistant Medical Officer at the Liverpool Workhouse.

WADD, F. J., M.B., C.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for Out-patients of the Richmond Hospital, vice Fenn, appointed to the care of In-patients.

WHITHAM, A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Adlington Local Board District; also Medical Officer for the Rivington District of the Chorley Union.

WOOD, W. J. H., L.R.C.P.Ed., L.R.C.S.Ed., M.R.C.S.E., has been reappointed Medical Officer for the Skirbeck District of the Boston Union.

Births, Marriages, and Deaths.

BIRTHS.

BIGGS.—On the 28th ult., at 93, Northcote-road, S.W., the wife of M. G. Biggs, M.R.C.S.E., of a son.

BUCK.—On the 3rd inst., at Camden-road, the wife of Alfred H. Buck, M.R.C.S.E., L.R.C.P., of a daughter.

DEANE-BUTCHER.—On the 30th ult., at Friar-street, Reading, the wife of W. Deane-Butcher, M.R.C.S.E., of a son.

EAGER.—On the 3rd inst., at The Limes, Woking, the wife of T. Cawley Eager, M.D., of a son.

ENGLISH.—On the 5th inst., at Fulham-road, S.W., the wife of T. Johnston English, M.D., of a daughter.

GIBSON.—On the 4th inst., at Stanley House, Blackstock-road, Finsbury-park, the wife of J. C. Gibson, M.R.C.P., L.R.C.S., & L.M. Ed., of a daughter.

HYATT.—On the 31st ult., the wife of Brownlow North Hyatt, M.R.C.S.E., of Shepton Mallet, of a son.

JORDISON.—On the 5th inst., at Malpas, Cheshire, the wife of Christopher Jordison, of a son.

KAY.—On the 26th ult., at Bentley Cottage, Bentley, Hants, the wife of William Kay, M.R.C.S.E. (prematurely), of a son.

MARRIAGES.

GRAY—MOUNTFORD.—On the 31st ult., at St. Luke's, West Holloway, Wellington Gray, Surgeon-Major H.M.'s Bombay Army, to Jane, only daughter of William Mountford, Esq., of Shipston-on-Stour.

JONES—HICKS.—On the 2nd inst., at St. John's, Notting-hill, William Jones, L.R.C.P., L.R.C.S., L.S.A.L., of Edmonton, to Emily Elizabeth, eldest daughter of George Hicks, Esq., of Royston Villa, Bayswater.

PYE—KIDSTON.—On the 1st inst., at 27, Blythswood-square, Glasgow, by the Rev. James Black, D.D., Walter Pye, F.R.C.S., of London, to Anna, daughter of J. B. Kidston.

WHERRY—CUST.—On the 2nd inst., at St. Botolph's Church, Cambridge, by the Rev. W. M. Campion, D.D., Rector, Hon. Canon of Ely and Rural Dean, George Edward Wherry, M.C. Cantab., F.R.C.S., to Albinia Lucy, eldest daughter of Robert Needham Cust, Esq.

DEATHS.

DOVE.—On the 31st ult., at St. Stephen's-square, Bayswater, William Watson Dove, L.R.C.P.Ed., late of Alexandria, eldest surviving son of the late Charles Kemp Dove, Postmaster-General of Bengal, aged 33.

GAMBLE.—On the 21st February, on board H.M.S. *Trojan*, lat. 6.57, long. 14.3 west, Ernest Langwith Gamble, M.R.C.S.E., L.R.C.P., L.S.A.L., second son of the late Richard Gamble, of Grantham, aged 25.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, April 7th, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
April 1	29·86	E.	40	38	83	53	33	..	Hazy
,, 2	29·82	E.	42	38	89	52	36	..	Cloudy
,, 3	30·09	E.	41	35	88	46	34	..	Cloudy
,, 4	30·06	E.	41	31	82	48	29	..	Fine
,, 5	29·80	E.	39	35	70	50	32	..	Cloudy
,, 6	29.80	E.	41	37	83	56	35	..	Overcast
,, 7	30·04	E.	42	38	76	68	33	..	Fine

Medical Diary for the ensuing Week.

Monday, April 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. George Lawson will read a short paper showing the evil results which follow Partial Operations in cases of Cancer of the Breast.—Mr. Reginald Harrison (of Liverpool), "On Acute Prostatitis."

Tuesday, April 12.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. C. Higgens, "On a Case of Vascular Protrusion of the Eyeball."—Mr. Arthur E. Barker, "On Nephrectomy by Lumbar Section."

Wednesday, April 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

ROYAL MICROSCOPICAL SOCIETY. — 8 P.M. Messrs. W. H. Shrubsole and F. Kitton, "On the Diatoms of the London Clay."

Thursday, April 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

Friday, April 15.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 16.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEDICAL EDUCATION IN THE UNITED STATES.

THE result of an experiment with the object of improving medical education in the United States may not be without interest for medical teachers in this country. It appears that the faculty of the Bellevue Hospital Medical College introduced, for the session 1880-81, important changes in the curriculum of instruction and in the requirements for graduation. The preliminary term was abolished, and the regular winter session was extended to six months. Attendance upon three winter sessions was made obligatory. Students were required during the first two years to attend all the lectures, didactic and clinical, and at the end of the first and second years to pass examinations in chemistry, anatomy, physiology, materia medica, and therapeutics. An examination in these branches having been passed, the third year was to be devoted to the practical departments of medicine, surgery, and obstetrics. The experience of the session of 1880-81, however, has led the Faculty reluctantly to the conclusion that to persist in the requirement of attendance during three courses would be to run a risk which they do not feel justified in incurring, and they accordingly announce that after the present session attendance during a third course will be optional. The non-success of the change is attributed by the college authorities, rather inconsequently, we think, to the apathy of the profession. The *Boston Medical and Surgical Journal* has some remarks of wholesome criticism on the want of courage on the part of the Bellevue Faculty and their readiness to take alarm at the prospect of failure before the experiment has been fairly tried.

Mr. G. S. Wilkins.—"Fomites" is the plural of "fomes" (fuel, anything that retains heat).

L. F. P. S.—The appointment is strictly in the hands of the guardians.

A CASE OF SUCCESSFUL REVACCINATION AFTER NATURAL COW-POX.

To the Editor of THE LANCET.

SIR,—On March 22nd I revaccinated M. H——, a servant in the neighbourhood, who had been successfully vaccinated when a child, one mark remaining, and afterwards when in Ireland she caught cow-pox while milking a cow, and it was only out of deference to the wishes of her mistress that she submitted to be revaccinated.

I inserted the lymph (humanised) in three places, telling her at the same time that I scarcely expected any result, as she had already had the disease. On March 29th she presented herself to show me the result, and, to my astonishment, I found that all three insertions had taken perfectly, and had resulted in good Jennerian vesicles, surrounded by a well-marked areola.

On inquiry she told me that she had had the same symptoms as when she had the cow-pox—viz., headache, nausea, and vomiting on the fourth and fifth days, together with loss of appetite and general malaise, but that now she felt much better. I hitherto understood that one who had had natural cow-pox was insusceptible to vaccine lymph from the human subject, and for that reason I write to ask of your numerous readers if they have met with similar cases.

I will only add that it is with great regret that I notice a growing prejudice against vaccination, which I by no means share, but, on the contrary, I have seen good proof of its capability of either preventing or modifying an attack of small-pox.

I am, Sir, yours respectfully,

St. George's-road, S.W., April 5th, 1881. J. H. BATTYE, M.D.

ALEXIS ST. MARTIN.

MANY of the readers of THE LANCET will recollect the remarkable case of this patient, whose chest was shot away, leaving a large opening into the stomach, and the observations on digestion made by the late Mr. Beaumont, of Toronto, and by physiologists in this metropolis. The poor man has just died, in great distress. For the sake of science it is to be hoped his stomach has been preserved, and may find a place in the museum of the College of Surgeons.

Junius.—The question is one of considerable difficulty and delicacy. The intermarriage of cousins is a subject which has not yet been adequately discussed or fully investigated, although a great deal has been written on it. In the case submitted, supposing there is a hereditary taint in the family, it would certainly be intensified, and the difference in age would probably contribute to that untoward result.

One of Them.—We regret to learn that the statement referred to was incorrect. We have every reason to believe it was made in good faith. It does not appear worth while now to reopen the question.

TRANSVAAL WAR—NATURE OF THE BULLET WOUNDS INFLICTED BY THE BOERS.

To the Editor of THE LANCET.

SIR,—I should, in conjunction with many of your readers, feel interested in any account which the surgeons with our Transvaal forces could afford of the nature of the wounds sustained by those slain or injured in battle. The curiosity aroused on this score is considerable, for rumour says that the bullets used by the Boers were of a kind forbidden by the Geneva Convention, being long in proportion to their rather narrow diameter from side to side, and hollow. Through this peculiarity of shape a horrible wound is the result. The projectile enters, making a small hole, but immediately flattens out like a medal, and at its exit leaves a large ragged opening. The question is, is the rumour correct in respect to the use of such bullets? If so, a few surgical accounts would be desirable.

I am, Sir, yours faithfully,
London, March 28th, 1881. H. R. OSWALD, M.R.

FUNGOID ORIGIN OF EPIDEMICS.

DR. MICHAEL W. TAYLOR has been lecturing before the Keswick Literary and Scientific Society on the Fungoid Origin of Epidemics. The lecture has been published, and the society may be congratulated upon the opportunity which has been afforded them of listening to so admirable an account of the present state of the question, both in its scientific and practical aspects.

Surgeon-Major John E. Purdon.—We think an article of the kind mentioned would be hardly suitable for our pages.

Mr. Thos. Horne.—The letter has unfortunately been mislaid. Will our correspondent kindly repeat his question.

Scrutator.—As the letter has already been published, we regret that we cannot depart from our rule by reprinting it.

PROFESSIONAL COMPETITION.

To the Editor of THE LANCET.

SIR,—Will you permit me to place before the profession, through the medium of your journal, the following letters, which have been sent by a neighbouring surgeon to the committee of one of my clubs. The only remarks I desire to be allowed to make upon them are: (1) the word "candidate" in the application implies a misapprehension on the part of the writer, there being no vacancy—real or contemplated; (2) I have held the appointment seven years, my house is about half a mile from the ironworks, and I live in the midst of the workmen, whilst the volunteer for the appointment lives two and a half miles away.

I am, Sir, yours obediently,
Alfreton, March 28th, 1881. THOS. WOLVERSON.

[COPY.]

Alfreton, March 15th, 1881.

DEAR SIR,—Will you kindly place the enclosed application before the Committee of the Alfreton Ironworks Sick and Accident Club.—Yours faithfully, T. L. ROBERTS.

To the Secretary.

Alfreton, March 15th, 1881.

GENTLEMEN,—I beg leave to offer myself as a candidate for the appointment of surgeon to the Alfreton Ironworks on the same terms as at present. In case I do not get the whole appointment, may I be allowed to attend those men who may give me their votes?

I am, yours obediently,
T. L. ROBERTS.

To the Committee of the Alfreton Ironworks Sick and Accident Club.

EXAMINATION AT THE ROYAL COLLEGE OF SURGEONS.

AT the Primary or Anatomical and Physiological Examination for the Membership of the College, which was commenced on Friday last, there were 214 candidates, against 173 in the corresponding period last year. The following were the questions submitted to the candidates at the written examination on Friday last, when they were required to answer four, and not more than four, out of the following six questions on anatomy, between 1 and 3 o'clock:—

1. Describe the second cervical vertebra.
2. Describe the greater and lesser sacro-sciatic ligaments. What foramina do they respectively assist in forming? What structures pass through these foramina?
3. Describe the rectus abdominis muscle, and the sheath within which it is contained. How is it supplied by bloodvessels and nerves?
4. Describe the parotid gland and its duct. Enumerate the structures with which they are in relation.
5. Describe the lateral ventricles of the brain.
6. Give the dissection necessary to expose the course and distribution of the posterior interosseous nerve.

The following were the questions on Physiology, to be answered between 4 and 6 o'clock:—

1. Describe the minute structure and the action of the auriculo-ventricular and semilunar valves of the heart.
2. What is the normal temperature of the human body? Within what limits does it vary physiologically? How is it kept within these limits?
3. What are the functions of the roots of the spinal nerves? By what experiments have these functions been determined?
4. Describe the minute anatomy and the mode of action of the œsophagus.
5. What is the evidence of the existence of a respiratory centre in the medulla oblongata? How is this centre excited to action?
6. Describe the varieties, the microscopic appearances, and the uses of yellow elastic tissue, and state where these varieties are chiefly found.

As usual lately the provincial students were allowed to offer themselves the first three days.

COTTAGE HOSPITALS.

K. Z.—Cottage hospitals are highly approved, but they should be carried on jointly by the medical practitioners of the locality, and all financial matters should be worked independently by a lay honorary secretary. The medical staff ought to have nothing to do with the collection of subscriptions, but they would do well to retain the administrative government of the hospital in their own hands.

MEDICAL MEN AND RAILWAY COMPANIES.

To the Editor of THE LANCET.

SIR,—I shall feel obliged by an expression of opinion as to who is liable to pay my fee for attendance under the following circumstances:—On the 10th of August last I was summoned by an official of the London, Chatham, and Dover Railway Company to be in attendance at one of their stations to meet a certain train, a telegram having been received that in consequence of a passenger having died in the train on the journey from Ramsgate the attendance of a medical man was required. I attended immediately, and on my arrival at the station found that the train had just started. The station-master, however, stopped it, and requested me to accompany the deceased to Holborn. This I did, and superintended the removal of the body, which was done by one of the company's own vans. I was conveyed to and from Holborn without payment of fare. I of course considered that my services were rendered to the company. Upon making application for my fee of one guinea, which I consider moderate for two hours' work, I am informed by their secretary that the company do not consider themselves liable. They, however, sent an inspector to the relatives of the deceased, who procured from them the sum of ten shillings, which he brought to me as payment in full.—I am, Sir, yours, &c.,

March 23rd, 1881. M.D.

"SOME OBSERVATIONS ON BRITISH MINERAL WATERS AT THE PRESENT TIME."

To the Editor of THE LANCET.

SIR,—Your correspondent, Dr. F. William Smith, is moving in the right direction. The valuable mineral waters of Great Britain are in danger of being neglected in favour of the by no means more efficacious Continental waters. I would ask him to add to his list the waters of the Dunblane Mineral Springs, Perthshire. At the beginning of the present century these springs were very fashionable, and the waters proved to be extremely beneficial. The water is saline, and allied to the Airthrey waters. In order to develop the use of the springs they have been recently acquired by the Dunblane Hydropathic Company, and a suitable pump-room has been fitted for their use.

I am, Sir, your obedient servant,
March 29th, 1881. R. M. J. BANNING, M.D.

APPOINTMENTS AND REAPPOINTMENTS.

Medical Officer of Health.—Our correspondent who appeals for sympathy on the score that, having done his duty well and apparently to the satisfaction of the sanitary authority he serves, the time of his re-election approaching, and he having reason to believe that he would be re-elected, the authority have thrown the election open to the world, has not quite realised the fact that so long as the sanitary authority are acting within their legal rights, appeal to either public or professional opinion is hopeless, and can only end in injury to himself. It is distressing to think that the *esprit de corps* of the profession is so imperfect that members can be found who will take advantage, to the prejudice of a brother member, of opportunities such as those given by the sanitary authority in question, but the fact must be recognised.

SIMULTANEOUS ARREST OF RESPIRATION AND THE HEART'S ACTION DURING THE ADMINISTRATION OF ETHER.

To the Editor of THE LANCET.

SIR,—During the past few months there has been considerable correspondence in the medical journals upon the relative merits of chloroform and ether in the production and maintenance of anæsthesia. Whilst the matter is still an open question with the profession, I am of opinion that not only should deaths occurring during the administration of these anæsthetics be recorded, but also all cases in which any untoward accidents has occurred, and those cases in which death has been averted by mere good fortune.

The following case happened to me a few days ago. Though recovery took place, I must confess it was a very near shave of being a great deal worse. I am the house-surgeon (the only one) of a provincial infirmary. On March 10th an old man of seventy presented himself with a dislocation of the left shoulder. It appears the accident occurred to him some five weeks before, and the surgeon who attended to him had never reduced the luxation. The man was fairly robust, with moderately firm muscles. It is an understood thing in this institution that the house-surgeon should not administer anæsthetics when alone except in cases of emergency. Not being a written rule, and at times very difficult to carry out, it has been constantly ignored. On this occasion, failing to reduce the shoulder by ordinary methods, I had the man put in bed, and gave ether from an Ormsby's inhaler as modified by Clover. Two nurses were at the bedside with me. The patient was unconscious, with relaxed muscles in four minutes; breathing and pulse both regular when I ceased to apply the inhaler; the shoulder was easily reduced by placing the heel in the axilla. A nurse took charge of his arm to prevent any movement during the period of recovery. I placed myself at the head of the bed watching the respiration and pulse at the temporal artery. Soon after the pulse and respiration ceased simultaneously, immediately previously having been regular. The patient became quite leaden in colour. I at once seized the arms and carried out artificial respiration by Silvester's method. I despatched one nurse for the battery and the other for a jug of water. As ill-luck would have it the battery was then in use in the out-patient room, and the jug on the ward-table was empty. These circumstances caused delay. I continued the respiration; water was dashed over the head. Just after I had the satisfaction of seeing a spasmodic gulp made by the man. The battery was now applied to the diaphragm region. Another gulp followed, and gradually recovery and consciousness took place. This case has been a warning to me. Though I have administered both ether and chloroform many times and often by myself, I have never fortunately had an accident. Should this note meet the eye of any house-surgeons, let them be only too careful not to relax their vigilant watch over the patient until perfect recovery has occurred, for in this case the accident did not occur soon after the commencement of the administration, but at the time when we were expecting the patient to waken, and some five minutes after the inhaler had been removed.

I am, Sir, yours faithfully,

March, 1881. R. H. F.

CAMBRIDGE UNIVERSITY.

OWING to great pressure on our space we are compelled to defer until next week the notice we had prepared of the important statutes made by the Cambridge University Commissioners, and submitted for the approval of Her Majesty on the 1st inst.

M.R.C.S.—The "internal capsule" is the tract of white matter between the optic thalamus and the lenticular nucleus of the corpus striatum, and is composed of fibres passing from the lower part (crusta) of the cerebral peduncle.

Dr. Macewen (Glasgow).—We shall be glad to receive the paper.

Dr. Caton.—We shall be glad to see the "parts" as issued.

Mr. H. G. Sutton.—The great majority of the profession are in accord with our correspondent in the matter.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Fenwick, London; Mr. Fletcher, Warrington; Mr. Pearson, London; Mr. Spratt, London; Mr. Craigie, London; Mr. Tripp, London; Messrs. Boyle and Son, London; Mr. Sawyer, London; Dr. A. Mackintosh, Chesterfield; Mr. Leeming, Kendal; Dr. Decroix, Paris; Dr. J. W. Bramwell, Newcastle-on-Tyne; Dr. Fisher, London; Mr. Sutton, Sittingbourne; Mr. B. Squire, London; Mr. Barnard; Mr. P. Thornton, London; Dr. Mahomed, London; Mr. Mackellar, Poona; Mr. H. J. Newman, London; Dr. Whamond, Jarrow-on-Tyne; Mr. Vitall; Dr. Macewen, Glasgow; Mr. E. W. Wallis, London; Mr. Tacey; Dr. Struthers, Aberdeen; Dr. Crocker, London; Mr. James, Ramsgate; Dr. Alford, Taunton; Dr. Jepson, Stone; Dr. Maclean, Netley; Mr. Reckitt, Wainfleet; Dr. Tomkins, Manchester; Mr. Westley, Cheltenham; Dr. Battye, London; Dr. Thomas, Glasgow; Mr. Calley, London; Messrs. Leader and Sons, Sheffield; Mr. Whitford; Miss Gray, Belfast; Mr. Gutteridge, Maldon; Mr. Hunt, Hull; Dr. Law, St. Leonards-on-Sea; Dr. Charteris, Glasgow; Mr. T. Horne, Sandwich; Mr. Collinwood, Corby; Mr. Walker, Dundee; Mr. De'Ath, Buckingham; Mr. Colston, New Whittington; Dr. Lees, Glasgow; Mr. Gick, Dublin; Dr. Goldschmidt, Madeira; Dr. Browne, Dundalk; Dr. Wise, Geneva; Dr. Caton, Liverpool; Mr. Edlin; Dr. Macdonald, Beith; Scientific Medicine; X. Y. Z.; L. F. P. S.; M.D.; M.R.C.S.; K. Z.; Broughton; Junius; A Retired Surgeon; The Editor of "Land and Water;" The Directors of the Art Furnishers' Alliance; S. H. W.; General Practitioner; J. H.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Lewis, Eastbourne; Dr. Johnson, Leith; Mr. Heely, Kennington; Mr. Lamb, Burford; Mr. Cusack, Cahir; Messrs. Bell and Co., Lancaster; Dr. Ramsey, Great Shalford; Messrs. Perteus and Co., Glasgow; Mr. Mosse, London; Mrs. Byrne, Weston-super-Mare; Messrs. Markland and Davey, Leeds; Dr. M'Calsey, East Ilsley; Mr. Hackett, Leeds; Mr. Rucker, Bayswater; Mr. Willey, Halesowen; Mr. Kemm, Corsham; Dr. Albrighton; Mr. Musson, Ashford; Dr. Burr, Liverpool; Mr. Thorpe; Dr. Talbot; Mr. Smith, Poplar; Mr. Hopkins, Bath; Mr. Macdonald, Dumfries; Mr. Nettle, Liskeard; Mr. Arnold, Chesham; Dr. Diser, Kenley; E. H., Merton; R. N. C.; Negotium; M., Brompton; Medicus, Camberwell; Z., Sheffield; C. J. W., Chatham; Omega, Llanelly; Harris; J., Edinburgh; Wiltshire; L. M.; Registrar, Bath; G. F. W. B., Leeds; Enquirer; F. B., Gainsboro'; Maidstone; Box, Stratton-on-the-Fosse; Nucleus, Liverpool; Sigma, Roath; K.C.B.; Dr. J.; L.R.C.P., Leamington; G. A. G.; &c., &c.

Japan Weekly Mail, Coffee Public-house News, Education, Journal of the National Chamber of Trade, Wareham Advertiser, The Analyst, Daily Courier, Middlesex Chronicle, Lincoln Gazette, Daily Free Press, La Emulacion, Building and Engineering Times, Scotsman, Welshman, Anglesey Reporter, Animal World, Birmingham Medical Review, Bristol Evening News, &c., have been received.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year.....£1 12 6 | Six Months £0 16 3

TO CHINA AND INDIA ..... One Year, 1 16 10

TO THE COLONIES AND UNITED STATES .. Ditto, 1 14 8

Post Office Orders should be addressed to JOHN CROFT, THE LANCET Office, 423, Strand, London, and made payable at the Post Office, Charing-cross.

Notices of Births, Marriages, and Deaths are charged five shillings.

Cheques to be crossed "London and Westminster Bank."

ADVERTISING.

Books and Publications	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Seven lines and under (each averaging ten words).	
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

The above Scale of Charges is arranged upon the basis of the classification adopted in the Index.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom, and all other Advertising Agents.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.